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HSTS SOFTWARE LISTINGS VOL. 4 OF 5 Diagnostics Part I SEARCH SYSTEM

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NGA review(s) completed.

			HSTS MASTER COMPUTER SOFTWARE LISTINGS
	1.		SL120100
			VOLUME 4 of 5
			POLOTIL TOTO
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			Prepared for:
			Central Intelligence Agency Washington, DC 20505
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TERM DETECTOR MEMORY TESTS MAIN MODULE

THIS MODULE EXECUTES MEMORY TEST CYCLES, ALL CONTROL INFORMATION FOR A TEST CYCLE IS OBTAINED FROM THE COMMAND LINE, THIS BUILDS TABLES AND SETS FLAGS IN ORDER THAT THERE NEED BE NO USER INTERVENTION DURING THE EXECUTION OF THE CYCLE; THE PROMPTS FOR COMMAND LINE INPUT AND GENERAL TMT ACTION ARE:

PROMPT FOR ALL TESTS, ALL MEMORIES, FULL RANGE TEST-CYCLING TABLE, THEN PROCEEDS TO 5. (FOR THE STRUCTURE OF THE TABLE, SEE BELOW REF TABLE - CURRENT JUMP i

- TABLE).

 IF THE ANSWER IS 'N', PROCEED TO 2 FOR MORE SELECTIVE PROMPTS.

 PROMPT FOR MEMORIES TO BE TESTED

 TMT SCANS THE COMMAND IL INE RESPONSE AND SETS A FLAG FOR EACH MEMORY MNEMONIC IT FINDS.
- PROMPT FOR MEMORY LIMITS

 IF A MEMORY WAS SELECTED IN 2 (IE. ITS FLAG WAS SET),

 TMT PROMPTS FOR NUMERICAL VALUES WHICH DEFINE THAT

 PORTION OF A MEMORY OWHICH THE TESTS ARE TO BE RIN, TMT PUTS THE MEMORY LIMITS FROM THE COMMAND LINE RESPONSE
- INTO A. TABLE:

 4. PROMPT FOR TESTS
 TMT SCANS THE COMMAND LINE RESPONSE FOR TEST NUMBERS:
 THEN, FOR EACH MEMORY WHOSE FLAG IS UP, TMT BUILDS A:
 ENTRY IN THE CURRENT JUMP TABLE (SEE BELOW). 5. PROMPT FOR LOOP ON TEST
- TMT-SETS-A-FLAG-THAT-DETERMINES-WHETHER A-TEST-CYCLE WILL-BE-EXECUTED-ONCE-OR-EXECUTED-REPEATEDLY. PROMPT-FOR-ERROR-OPTIONS
- TMT-SETS-FLAGS-WHICH-DETERMINE-WHAT-ACTION-WILL-BE
- TAKEN IN THE EVENT OF AN ERROR.
 PUT-OUT DIRECTIONS FOR STOPPING TEST
 TMT ALLOWS THE TEST CYCLE TO BE INTERRUPTED BY
 AN UNSOLITED CHARACTER INTERRUPT FROM THE TERMINAL. TEST - CYCLE - BEGINS
- NO-MORE-PROMPTING:

REFERENCE · TABLE · - · CURRENT · JUMP · TABLE ·

THE ACTUAL EXECUTION OF A TEST CYCLE DEPENDS UPON THE CONTENTS OF THE CURRENT JUMP TABLE, TMT FILLS IN THIS TABLE BY MOVING ENTRIES FROM THE REFERENCE TABLE DEPENDING UPON-WHICH MEMORIES AND WHICH TESTS WERE SELECTED.

EACH-TEST-1 - 12-HAS-ITS-OWN-CONTROL ROUTINE IN THIT.
THE-REFERENCE TABLE ENTRIES ARE THE ADDRESSE OF THESE CONTROL ROUTINES. FOR EACH TEST, THE REFERENCE TABLE CIA-RDP85-00514R000200020001-3

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GONTAINS IN CONTIGUOUS POSITIONS THE CONTROL ROUTINE ADDRESS REPLICATED A NUMBER OF TIMES. THE NUMBER OF REPLICATIONS IS EQUAL TO THE NUMBER OF MEMORIES THAT CAN BE TESTED (IE: 6, THE VALUE OF THE EQUATE MEMO). SO, FOR EXAMPLE, SINCE THERE ARE 6 MEMORIES TEST 1.'S CONTROL ROUTINE ADDRESS WILL BE REPEATED IN THE REFERENCE TABLE 6 TIMES:

.WORD: T1,T1,T1,T1,T1,T1

EACH ADDRESS HERE IS A PLACE HOLDER FOR A MEMORY. THAT IS, THE FIRST 'TI' (POSITION 0) IS A PLACE HOLDER FOR FSA A THE SECOND 'TI' (POSITION 1) IS A PLACE HOLDER FOR FSA B THE THIRD (POSITION 2) FOR FSA C. THE FOURTH (POSITION 3) FOR THE INPUT BUFFER THE FIFTH (POSITION 4) FOR THE OUTPUT BUFFER, AND THE SIXTH (POSITION 5) FOR THE BYTE TRANSLATOR: THE IDEA HERE IS THAT RATHER THAN HAVING SEPARATE CONTROL ROUTINES FOR EACH MEMORY FOR EACH TEST, TMT.CAN MAKE USE OF THE POSITIONS OF ADDRESSES IN THE TABLE.

THE FILLING OF THE CURRENT JUMP TABLE TAKES PLACE AS FOLLOWS: A UNIQUE FLAG IS SET IN A FLAG WORD FOR EACH MEMORY WHOSE MNEMONIC TMT ENCOUNTERS IN THE COMMAND LINE RESPONSE THE THE PROMPT SELECT MEMORIES: EACH POSITION IN THE FLAG WORD (0 - 5) CORRESPONDS TO A MEMORY PLACE HOLDER POSITION IN THE FEAST ABLE AND CURRENT JUMP TABLE, EG. THE FLAG FOR FSA A IS IN POSITION OF IN THE FLAG WORD AND THE PLACE HOLDER POSITION FOR FSA A IS OF SEACH TEST NUMBER TMT ENCOUNTERS IN THE COMMAND LINE RESPONSE TO THE PROMPT SELECT TEST (S)', TMT MOVES THE ADDRESS OF THAT TEST SCONTROL ROUTINE FROM THE REF TABLE TO THE CURRENT JUMP TABLE DEPENDING UPON THE MEMORY FLAG SETTINGS, IE, TMT SCANS THE MEMORY FLAG WORD AND FOR EVERY BIT SET MOVES AN ADDRESS FROM THE REF TABLE. TO THE CURRENT JUMP TABLE.

EXAMPLE:
IF TMT.ENCOUNTERS.A.'1' IN THE COMMAND LINE RESPONSE TO SELECT TEST(S) AND THE FLAGS FOR FSA-A AND THE OUTPUT BUFFER HAVE BEEN PREVIOUSLY SET, TMT WILL MOVE TEST 1'S CONTROL ROUTINE ADDRESS FROM THE REF TABLE TO THE CURRENT JUMP TABLE IN POSITIONS 0 AND 4 FOR TEST 1.

REF. TABLE: .WORD: T1.T1.T1.T1.T1.T1. .WORD: T2.T2.T2.T2.T2.T2.T2

CURRENT JUMP TABLE: .WORD Ti.0.0.0.Ti.0 .WORD 0.0.0.0.0

MEMORY-CYCLING-

THE CYCLE CONTROL ROUTINE MAINTAINS A POINTER TO THE CURRENT JUMP TABLE. THE CONTROL ROUTINE SCANS THE TABLE UNTIL IT FINDS A NON-ZERO ENTRY. IT DERIVES THE MEMORY.

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TO BE-TESTED FROM THE PLACE-HOLDING CHARACTERISTICS OF THE TABLE:

- GETS THE POSITION OF THE CURRENT NON-ZERO ENTRY
- RELATIVE TO THE BEGINNING OF THE TABLE.
 DIVIDES THIS NUMBER BY THE NUMBER OF MEMORIES, THE
 REMAINDER GIVES THE PLACE-HOLDER VALUE.

FOR-EXAMPLE, IF-'INPUT BUFFER' AND 'TEST-2' HAVE-BEEN-SELECTED, THE-CURRENT-JUMP-TABLE WILL-CONTAIN THE-FOLLOWING-INFORMATION:

0.0.0.0.0.0 0.0.0.T2.0.0 .MORD

THE FIRST NON-ZERO ENTRY IN THE TABLE IS AT OFFSET 9. THE REMAINDER FROM THE DIVISION OF 9 BY 6 (6 = NUMBER OF MEMORIES) IS 3. THE VALUE 3 IS THE PLACE-HOLDER --VALUE FOR THE INPUT BUFFER.

THE CONTROL ROUTINE PASSES CONTROL TO THE TEST CONTROL ROUTINE WHOSE ADDRESS IS THE CURRENT NON-ZERO ENTRY IN THE CURRENT JUMP TABLE. THE CYCLE CONTROL ROUTINE PASSES THE REMAINDER FROM THE ABOVE DIVISION IN RO. THE TEST CONTROL ROUTINE USES THE CONTENTS OF RO AS AN INDEXT INTO A TABLE OF TMT SUB-MODULE MEMORY TEST ADDRESSES. THE TEST CONTROL ROUTINE IN TURN PASSES CONTROL TO THE ROUTINE: IN: THE: SUB-MODULE: THAT: WILL: EXECUTE: THE: TEST ON THE: CORRECT: MEMORY.

ALL SUB-MODULE ROUTINES ARE LOCATED IN THE MODULE TTEST.

ALL OF THESE ROUTINES RETURN TO THE TEST CONTROL ROUTINE THAT CALLED THEM. THE TEST CONTROL ROUTINES RETURN TO THE CYCLING ROUTINE WHICH SCANS THE CURRENT JUMP TABLE FOR THE NEXT - NON-ZERO - ENTRY:

EXIT FROM THE PROGRAM DEPENDS UPON THE STATUS OF THE CURRENT JUMP TABLE, LOOP OPTIONS, HALT OPTIONS, OR TERMINAL INPUT.

JUMP - TABLE - EMPTY -

- EXIT - EXECUTE ONE TEST CYCLE

LOOP · OPTION · OFF LOOP - COUNT

EXECUTE A NUMBER OF CYCLES EQUAL TO-THE LOOP COUNT HOLT AFTER ONE ERROR

O'SE SEE

HALT-OPTION-ON-

THE LOOP COUNT HALT AFTER ONE ERROR

COUNT: + "H"

PRINT A NUMBER OF MESSAGES EQUAL TO-THE COUNT AND HALT

WHILE THE TESTS ARE RUNNING. THE ENTERING FROM THE TERMINAL OF ANY CHARACTER OTHER THAN \cup C, P, OR T (THESE HAVE SPECIAL MEANINGS - SEE THE ROUTINE (AST*) STOPS THE TESTS IMMEDIATELY.

MEMORY TESTS:

117 118

125 126

128 129 130

131 132 133

146

152 153

154 155

157

158

160

161

162 163

```
0 - M1 1 10 - 27-MAR-80 : 15:38 proved For Release 2005/07/ € CIA-RDP85-00514R000200020001-3
                                                                                                                                                                                                                                                                                                                                                          TEST-02 WRITE-ZEROS TEST-03 WRITE-ONES WRITE-ONES WRITE-125252 WRITE-125252 WRITE-READ-146314 AND-031463 MEMORY CROSS-TALK-TEST WRITE-ADDRESS COMPLEMENT INTO-ADDRESS TEST-08 WRITE-000377 AND-177400 WRITE-000377 WRITE-125T WRITE-125
172
173
174
175
                                                                                                                                                                                                                                                                                           2
177
178
  180
181
182
183
  184
  185
                                                                                                                                                                                                                                                                                                                                                            ASSEMBLY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FROM-[5.3]
 186
187
                                                                                                                                                                                                                                                                                                                                                          MCR>MAC.TMT, LP = IMO4, TMT.
 188
189
                                                                                                                                                                                                                                                                                                                                                            TASK BUILD:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       :ON-TERM DETECTOR-PACK-
                                                                                                                                                                                                                                                                                                                                                            TMT, TMT=TMT, TTEST.
191
192
193
                                                                                                                                                                                                                                                                                                                                                          PAR=PAR14K
                                                                                                                                                                                                                                                                                                                                                          TASK=...TMT
ASG=TT0:1
ASG=TT0:2
 194
195
196
```

```
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     198
     199
     200
                                                              LOCAL DATA AREAS
     201
     292
     203
                                                              .MCALL - QIOW$$,QIO$$,EXIT$$,ABRT$$,GCML$,GCMLB$,FSRSZ$,CLEF$$,ASTX$$
     204
     205
     206
                    ARRES 1
                                                    LUN.TT
                                                                                             :LUN-FOR TTØ
:EVENT-FLAG-FOR-TTØ
     207
                    000001
                                                    EFH:1
     208
                    000002
                                                    CMILUN-
                                                                        2
                                                                                             :LUN FOR GCML
     209
     210
                                                              SETTINGS OR FLAG WORD MBASE!
     211
     212
                    000001
                                                    LOOP.
                                                                                             :LOOP·FLAG
     213
                    000002
                                                    TEST6
                                                                        2
                                                                                             :TEST-6 IN-EFFECT-
:TEST-10 IN-EFFECT
     214
                    000004
                                                    TEST10
     215
                    000010
                                                   ALLTST.
                                                                        10
                                                                                             :ALL · TESTS · IN · EFFECT
:HALT · FLAG ·
     216
                    000020
                                                   HALT.
                                                                        20
     217
218
                    000040
                                                   ERROR -
                                                                        40
                                                                                             :ERROR · HAS · OCCURRED
     219
                                                              SETTINGS FOR FLAG WORD 'SELECT'
     220
221
222
223
                    000001
                                                                                             :FSA:- A
                    000002
                                                   В
                                                                        2
                                                                                             :FSA·-
                                                                                                     В
                    000004
                                                                                             :FSA -
     224
                    000010
                                                                                             : INPUT BUFFER
                                                                        10
     225
                    000020
                                                   O
T
                                                                                             :OUTPUT BUFFER
     226
227
                    000040
                                                                        40
                                                                                             :BYTE TRANSLATOR
                                                                        BEX-
     229
         000000
                    131574
                              07743411
                                                   MYSELF:
                                                              .RAD50
                                                                                            ;ABORT:THIS:TASK:
;RECEIVER:FOR:CHAR FROM TERMINAL
     230
         000004
                    300000
                                                   ASTWRD:
STAT:
                                                              .WORD
     231
         000006
                                                              .BLKIII
                                                                                            : IO STATUS
     232
         000012
                    имимия
                                                   ERWORD:
                                                              .WORD
                                                                        ø
                                                                                            : INFO/ERROR MESSAG INDEX
         000014
                    000000
                                                                                            *MAX-ERROR-MESSAGES-TO-PRINT

*MAX-ERROR-MESSAGES-TO-PRINT

*VALUES-CONVERTED-FROM-COMMAND-LINE:

*WORK-FIELD-FOR-UPPER-MEMORY LIMITS:

*WORK-FIELD-FOR-LOWER-MEMORY LIMITS
                                                   ERL IM:
                                                              .WORD
                                                                        ø
     234
         000016
                    000000
                                                   BINUD:
                                                              .WORD
    235
         000020
                    000000
                                                   UPPER:
                                                              . MORD
    236
         000022
                    000000
                                                   LOWER:
                                                              .WORD
                                                                       Й
     237
         000024
                    000000
                                                   BASE:
                                                              .WORD
                                                                                            GENERAL FLAG:
SUSER-TEST-PATTERN
ADDRESS SKIP-FACTOR-FOR-TEST-6
    238
         000026
                    000000
                                                   MTIA:
                                                              .WORD
    239
         000030
                    000000
                                                   T6FACT:
                                                              JUORD
                                                                       Ø
         000032
    240
                                                   GCMBUF:
                                                              .BLKW
                                                                        41.
                                                                                            :COMMAND LINE BUFFER
    241
         000154
                    000000
                                                                                            COMMAND LINE LENGTH:
POINTER TO COMMAND LINE
HIGH WORD OF PASS COUNT
                                                   GCMLEN:
                                                              .WORD
    242
         000156
                    000000
                                                   GCMPHT:
                                                              . WORD
    243
         000160
                   000000
                                                   PASSH:
                                                              .WORD
    244
         000162
                                                                                            PASS:
                                                              .WORD
         000164
    245
                    000000
                                                   LOOPCT:
                                                             .WORD
         000166
    246
                    000000
                                                   SELECT:
                                                              .WORD
    247
         000170
                    000000
                                                  MTPHT:
                                                              . MORD
    248
         000172
                    000000
                                                   MTCHT:
                                                              .WORD
         000174
    249
                   ийийий
                                                                                            :SELECT FSA-A
:SELECT FSA-B
                                                   SETTBL:
                                                             .WORD
                                                                       T$FSAA
    250
         000176
                   000004
                                                              .WORD
    251
         000200
                   000014
                                                             .WORD
                                                                       T$FSAC
                                                                                            SELEBRAN STATE
    252
   253
254
                                                             TABLE USED IN TRANSLATING FROM ASCII DECIMAL TO BINARY
```

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```
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255 000202
                                          TROCT: ...
256
257
              0002631
                                                             .+61
1.2.3.4.5.6.7.8..9..10..11..12.
    000263
                 001
                           002:
                                    003
258
              000401
259
260
                                                    STRING OF ALL TESTS (USED AS PSEUDO COMMAND LINE)
261
262
    000401
                 061
                           040
                                          ALLSTR: .ASCII. /1 2 3 4 5 6 7 8 9 11 12/
263
              000027
                                          STRLEN.
264
265
                                                    VALID MEMORY MNEMONICS AND MEMORY SELECT FLAG SETTINGS
267
268
    000430
                                          CTBL:
    000430
269
                  101
                           115
                                                             ZAMZ
                                                                                ;FSA-A-
270
    000432
              000001
                                                    .WORD
    000434
                  102
                           115
                                                    .ASCII.
                                                             /BM/
                                                                                :FSA-B
272
              000002
    000436
                                                    .WORD
                                                             В٠
273
    000440
                 103
                           115.
                                                    .ASCII
                                                             /CM/
                                                                                :FSA-C-
274
    000442
              000004
                                                    .WORD
275
    000444
                  111
                                                    .ASCII
                                                             /IB/
                                                                                : INPUT BUFFER
276
              000010
    000446
                                                    .WORD
    000450
                  117
                           102
                                                    .ASCII
                                                             /0B/
                                                                                ;OUTPUT BUFFÉR
278
    000452
              000020
                                                    .WORD
.ASCII
                                                             0
    000454
000456
                                                             ZBTZ
279
                  102
                           124
                                                                                :BYTE · TRANSLATOR
280
              000040
                                                    .WORD
28 i
              000006
                                          CNUM-
                                                             <.-CTBL/4>
282
283
                                                   MEMORY-TEST-CONTROL-ROUTINE-ADDRESSES-(REFERENCE)
284
285
    000460
                                          MTREF:
286
    000460
              0060641
                       006064" 006064"
                                                    .WORD
                                                             T1.T1.T1.T1.T1.T1
287
    000474
              0060741
                       006074*
                                0060741
                                                    .WORD
                                                             T2, T2, T2, T2, T2, T2
T3, T3, T3, T3, T3, T3
              006110'
                       006110
288
    000510
                                006110'
                                                    .WORD
289
    000524
                       006126
                                 006126*
                                                    .WORD
                                                             T4, T4, T4, T4, T4, T4
290
    000540
              006144"
                       0061441
                                006144
                                                    .WORD
                                                             T5, T5, T5, T5, T5
291
    000554
000570
              006174°
006200°
006210°
                       0061741
                                                    .WORD
                                                             T6.T6.T6.T6.T6.T6
T7.T7.T7.T7.T7.T7
292
                       00620A1
                                ·006200°
                                                    .WORD
293
    000604
                       0062101
                                 0062101
                                                    .WORD
294
    000620
              006240*
                       0062401
                                 0062401
                                                    .WORD
                                                             T9.T9.T9.T9.T9.T9
T10.T10.T10.T10.T10
T11.T11.T11.T11.T11
                       006274: 006274'
006300: 006300'
295
              006274*
    000634
                                                    .WORD
296
    000650
              006300
                                                    .WORD
297
              006424' 006424'
    000664
                                006424
                                                    .WORD
                                                             T12, T12, T12, T12, T12, T12
298
299
                                                   LOWER - AND - UPPER - MEMORY LIMITS - (REFERENCE)
300
301
    000700
                                          LIMREF:
302.000700
              001777
                                                             1777
                                                                                :FSA-A-UPPER-LIMIT
303 000702
304 000704
              000000
001777
                                                    .WORD
                                                             ō
                                                    .WORD
                                                             1777
                                                                                ;FSA-B UPPER LIMIT
    000706
              000000
                                                    JUDRD
                                                             0
306
307
    000710
000712
                                                    . WORD
                                                             1777
                                                                                ;FSA+C:UPPER:LIMIT
              000000
                                                    .WORD
    000714
              163776
                                                    . WORD
                                                             163776
                                                                                ; INPUT BUFFER UPER LIMIT
309 000716
              160000
                                                    .WORD
                                                             160000
310 000720
              003776
                                                             3776
                                                                                ;OUTPUT-BUFFER-UPER-LIMIT-
311 000722
              999999
                                   . LIORD · Ø
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                                                    .WORD
```

F

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```
;BYTE · TRANSLATOR · UPPER · LIMIT
                                                              .WORD
                                                                         255.
312-000724
313-000726
314
                 000377
                                                                         0
                 равара
                                                                         <.-LIMREF>/2·
                                                  LIMNUM.
                 000014
315
                                                              MEMORY-TEST-ROUTINE-ADDRESSES-(CURRENT-JUMP-TABLE)
316
317
                                                                                                : NUMBER - OF - TESTS -
318
                                                   TESTS:
                                                                                                ; NUMBER · OF · MEMORIES
                 000006
                                                   MEM.
                                                                         6.
                                                   MTSUB:
320 000730
                                                                         <TESTS*MEM>
321
322
323
     000730
                                                              LOWER-AND-UPPER-MEMORY LIMITS-(CURRENT-TEST)
324
     001150
                                                   CURLIM:
325
326
     001150
                                                               .BLKW-
                                                                         LIMNUM-
327
328
                                                              SUB-MODULE MEMORY TEST ROUTINE ADDRESSES
329
330
                                                                          STUFF, STUFF, STUFF, STUFI, STUFO, STUFT
                 000000G 000000G 000000G STADDR:
                                                              .WORD
331
      001200
                                                                         TiF, TiF, TiF, TiI, TIO, TIT,

.WORD TEF, T6F, T6F, T6I, T60, T6T

T7F, T7F, T7F, T7I, T70, T7T

T12FD, T12FD, T12FD, T12ID, T12OD, T12TD-

T12FU, T12FU, T12FU, T12IU, T12OU, T12TU
                 000000G · 000000G · 000000G ·
                                                              .WORD
332
333
     001214
                                                   T7ADDR: .WORD
334
                 000000G-000000G-000000G
                 000000G 000000G 000000G TCDADD: .WORD 00000G 000000G 000000G TCUADD: .WORD
 335
      001244
336
337
      001260
                                                               ERROR · ROUTINE · WORK · AREAS
339
340
                                                                                                 ; TEST · PATTERN ·
 341
      001274
                  000000
                                                    CKDATA::
                                                                .WORD
                                                                                                ;TEST-12 READ-TEST PATTERN:
;TEST-12 WRITE-TEST-PATTERN:
;CURRENT MEMORY-ADDRESS:
;ADDRESS AT-ERROR:
;NUMBER-OF-ERRORS:
                 000000
                                                   CK2::
CK3::
                                                               LHORD
 342
      001276
                                                               .WORD
 343
      001300
                                                    PREADD::
                                                                .WORD
                                                                          Ø
 344
      001302
                  000000
                                                              : .WORD
                                                   ERRADD::
ERRCT::
 345
      001304
                  000000
                                                                          Я
                                                                          ĕ
                  000000
 346
      001306
                                                                                                 ; ERRONEOUS · RESULTS FROM · MEMORY · - 1
                                                    ERW1::
                                                               .WORD
      001310
001312
 347
                  000000
                                                    ERW2::
                                                                .WORD
                                                                          Ø
                                                                                                ; - 2
; - 3
 348
                                                                          0
      001314
                  000000
                                                    ERW3::
                                                                .WORD
 350
                                 949
                                             949
                                                    ASWRK:
                                                                .ASCII
      001316
                      040
 351
                                                                          /TEST.//
/PASS.//
/FAILING.MEMORY:/
                      124
                                  105 |
                                                    TMSG:
                                                                .ASCII
      001323
001330
 352
                                  101
                                             123
                                                    PMSG:
                                                                .ASCII-
 353
                       120
 354
       001335
                       106
                                  101
                                             111
                                                    EMSG:
                                                                .ASCII
                                                                .ASCII.
                                                                          /ADDRESS: /
                                                    AMSG:
      001355
                       101
                                  104
                                             104
                                             120
                                                               .ASCII
                                                                          /EXPECTED: /
 356
357
      001366
001400
                                  130
                                                    EMSG:
                      105
                       122
                                  105
                                             103
                                                    RMSG:
                                                                .ASCII
                                                                          /RECEIVED: /-
                                                                .ASCII. /* * */-
 358
       001412
                                  040
                                             052
                                                    UNMSG:
 359
                                                               MEMORY NAMES
 360
361
362
                                                    FTBL:
       001417
                      106
106
                                  123
                                             101
      001417
001425
 363
                                  123
                                             101
                                                                .ASCII
                                                                          /FSA-B./.
/FSA-C./.
 364
 365
      001433
                       106
                                  123
                                             101
                                                                .ascit.
                                                                .ASCII
                                                                           ZIMPUT-
      001441
                      111
117
                                  116
125
                                             120
                                                                           ZOUTPUTZ
 367
368
       001447
```

.ASCII

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∕BTRANS

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001455

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O M1110 27-MAR-80 15:38 PAGE 9-3
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TMT------ M
    369
370
371
                                                          PRINT-LINE
                                                                                                               372
    373 001463
374 001465
                       015
                                012
                                                          .BYTE
                                                                    15,12
                                                                                                 :PRECEDE · PRINT LINE · WITH · CRLF ·
                                                PRINT:
                                                          .NLIST.
                                                                    MEB
    376
377
378
                   000116
                                                          .REPT
                                                                    78.
                                                          .BYTE
                                                                    40
                                                          .ENDR
                                                          .LIST
                                                                   MEB
     380
     381
     382
                                                          TABLE · OF · MESSAGES ·
     383
     384
     385
         001603
001604
                       aaa
                                                          .BYTE
     386
                                012
                                          015
                       015
                                                          .BYTE
                                                                    15, 12, 15, 12
         001610
                       124
                                 105
                                          123
                                                          .ASCIZ
                                                                    /TEST(S) ENDED/-
15,12,15,12
    388
389
         001626
                       015
                                                          BYTE
         001632
                       124
                                 105
                                          123
                                                          .ASCIZ
                                                                    /TEST(S) HALTED/
         001651
     390
                       015
                                012
                                                           .BYTE
                                                                    15,12
                                                                    391
         001653
                       105
                                 116
                                          124
                                                          .ASCIZ
     392
         001717
                       015
                                 012
                                          015
                                                          BYTE
     393
         001723
                       115
                                 105:
                                          115
                                                          .ASCIZ
         001752
                       015
                                012
                                          015
                                                          .BYTE
     395
         001760
                                          122
                                                          .ASCII
                       015
015
                                012
012
     396
         002025
                                          000
                                                          .BYTE
                                                                    15,12,0
     397
         002030
                                                          .BYTE
                                                                    /TEST 6 INCOMPATABLE WITH MEMORY LIMITS. TEST DISCARDED 15.12.
                                                                    15,12
                                                          .ASCIZ
.BYTE
     398
         002032
                                 105
                                          123
     399
         002122
                       015
         002124
002157
                       105
015
015
                                122
012
012
     499
                                          122
                                                           .ASCII
                                                                    ERROR: NO SELECTIONS, EXIT./
     49.1
                                          000
                                                           .BYTE
                                                                    15,12,0
         002162
     402
                                                                    15,12
                                                          .BYTE
         002164
                                                           .ASCIZ
     403
                       111
                                 116
                                          126
                                                                    /INVALID ERROR OPTION/
     404
         002211
                       015
                                                          .BYTE
                                                                    15.12
         002213
002237
     405
                       111
                                 116
                                          126
                                                          .ASCIZ
                                                                    ZINVALID LOOP OPTIONZA
     406
                       015
                                012
116
                                                           .BYTE
                                                                    15.12.
     407
          002241
                       111
                                          126
                                                          .ASCIZ
.BYTE
                                                                    /INVALID TEST PATTERN/
15,12
     408
          002266
                       015
                                                                    /INVALID TEST NUMBER/
     409
         002270
                       111
                                 116
                                                           .ASCIZ
     410
         002314
                       015
                                 012
                                                          .BYTE.
                                 114
     411
          002316
                       111
                                          114
                                                                    /ILLEGAL·ODD·ADDRESS/
     412
         002342
                       015
                                 012
                                                                    15, 12
                                116
012
     413
         002344
                       111
                                           126
                                                           .ASCIZ
                                                                    /INVALID UPPER MEMORY-LIMITS/-
     414
                                                                    15,12.
/INVALID LOWER MEMORY LIMITS/
         002400
                       015
                                                           .BYTE
     415
          002402
                       111
                                 116
                                                          .ASCIZ
                                          126
     416
          002436
                       015
                                 012
                                                                    15,12
     417
          992449
                       111
                                116
012
                                          126
                                                           .ASCIZ·
                                                                    /INVALID MEMORY.OR.BUFFER.MNEMONIC/
     418
         002502
                       015
                                                           .BYTE
                                                                    15.12.
         002504
002525
002527
                                 116
                                          126
                                                           .ASCIZ
                                                                    /INVALID-RESPONSE/-
                       015
105
     420
                                012
     421
                                 116
                                          124
                                                           .ASCIZ-
                                                                    ZENTER · ERROR · CONTROLZ ·
                                012
117
012
         002553
                       015
                                                           .BYTE
                                                                    15,12
    423 002555
424 002576
                      114
015
                                          117
                                                          .ASCIZ
                                                                    /LOOP ON TEST (S) ?/
                                       BYTE: 15.12:
124 .ASCIZ: ENTER PATTERN FOR TEST 10.
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         002600
                       105
                                 116
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TMT------MACRO-M1110 27-MAR-80 15:38 PAGE-9-4 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
                                                         .BYTE
     426 002632
                      015
                                012
                                                                  15,12
     427
         002634
                                         114
                                                         .ASCIZ
                                                                  /SELECT TEST/
     428
         662658
                      015
                                012
                                                         .BYTE
                                                                  15,12
         002652
002722
                      105
015
                                116
012
     429
                                         124
                                                         .ASCIZ
                                                                  ZENTER MEMORY LIMITS FOR BYTE TRANSLATOR.
     430
                                                                  15.12

/ENTER-MEMORY-LIMITS-FOR OUTPUT-BUFFER/
                                                         .BYTE
         002724
                      105
                                                         .ASCIZ
     431
                                116
                                         124
     432
         002772
                      015
                                012
         002774
                                116
012
                                         124
     433
                      185
                                                         .ASCIZ
                                                                  ZENTER MEMORY LIMITS FOR INPUT BUFFER
         003041
                      015
                                                         .BYTE
                                                                  15,12
     435
         003043
                       105
                                         124
                                                         .ASCIZ
                                                                  ZENTER MEMORY LIMITS FOR FSA-C
                                                                  15,12
/ENTER·MEMORY·LIMITS·FOR FSA-B/
     436
         003101
                                012
116
                                                         .BYTE.
                      0.15
                       105
     437
         003103
                                         124
     438
         003141
                      015
                                012
                                                         BYTE
                                                         .ASCIZ
.BYTE
                                116
012
     439
         003143
                      105
                                         124
                                                                  /ENTER·MEMORY·LIMITS·FOR FSA-A/
     440
         003201
                      015
                                                                  15, 12
          003203
                                105
                                         114
                                                         .ABCIZ
                                                                  /SELECT: MEMORY/:
     442
         003221
                      015
                                012
                                                         .BYTE
                                                         .ASCIZ
     443
         993223
                       101
                                114
                                         114
                                                                  /ALL TESTS, ALL-MEMORIES, FULL-RANGE-?/-
                      377
     444
         003271
                                               ASCIZ:
                                                                  377
     445
     446
447
          003272
                                               PMSG2:
     448
         003272
                                101
                                         123
                                                         .ASCII: /PASS:NUMBER:/
     449
                   000014
                                               PM2LN
                                                                  .-PMSG2
     450
     451
         003306
                                               ENDOF:
     452 - 003306
                       105
                                116
                                         104
                                                         .ASCII. /END OF.PASS./
     453
                   000014
                                               ENDLN
                                                                  .-ENDOF
     454
455
                                                         .EVEN
                                                                  BEX.
                                                         .LIST
     456
                                                         .N_IST
                                                                  CND
     457
                                               į
     458
     459
                                                        COMMAND-LINE MACRO
     469
     461
          003322
                                               GCMBLK: GCMLB$
                                                                  2, GCMBUF, CMILUN-
2.
          003322
003364
                       002
                                                         .BYTE
                                                                  CMILUN
                       002
                                                         .BYTE
                   003510
          003370
                                                         .WORD
                                                                  65$
          003376
                       001
                                                         .BYTE
          003341
                       000C
                                                          BYTE
                                                                  FD:TTY!FD:REC!FD:CCL
          003462
003463
                       คคค
                                                         .BYTE
                                                         BYTE
                                                                  GE.COM!GE.IND!GE.CLO!GE.SIZ
                       047
          003474
                                002
                                                                                                                  7.7
          003476
003500
                                                                  64$
                   0035501
                                                         .WORD
                   000032
                                                         .WORD
                                                                  GCMBUF
          003502
                       015
                                                         .ASCII: <15><12>
          003504
                       040
                                040
                                          040
          003507
                       076
          003516
                   012321
                                                         .RAD50
                                                                  ZCMIZ
          003520
                   000000
                                                         .WORD
          003522
003524
                   000000
                                                         .WORD
                                                                  Ø
                                                         .RAD50
                                                                  ZCMDZ
                   012314
          003546
                   000120
                                                          WORD.
                                                                  80.
     463 003630
                                                         FSRSZ$
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TMT-------
              70 M1110 27-MAR-80 15:38 PAGE 10 Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
     465
    466
467
                                                           ENTER - HERE -
     468
     469
    470
471
                                                           PROMPT FOR ALL MEMORIES, ALL TESTS
     472
         003630
                                                 START:
     473 003630
                   004767
                             005240.
                                                                     PC,OUT1
                                                                                         ; ISSUE · INFORMATION MESSAGE
     474
         йй3634
                   004767
                             005370
                                                 ALL:
                                                           JSR
                                                                     PC.ALLSEL
                                                                                         ; ISSUE · PROMPT
     475
         003640
                   103003
                                                           BCC
                                                                     1$
                                                                                         : NEED - A - RESPONSE
         003642
                   004767
                             005302
                                                           JSR.
                                                                     PC, ERR2
                                                                                         ; "INVALID RESPONSE"
     477
         003646
                   000772
                                                                     ALL:
                                                                                         :PROMPT AGAIN
     478
          003650
                   004767
                                                                                         ;LOCATE·RESPONSE·IN·COMMAND LINE
;OK, VALIDATE·RESPONSE·
                                                           JSR
                             004420
                                                 15:
                                                                     PC.FIND.
     480
         003654
                    103003
                                                           BCC
                                                                     2$
     481
         003656
                   994767
                             005266
                                                           JSR
                                                                     PC, ERR2
     482
         003662
                   000764
                                                           BR
                                                                     ALL
                                                                                         ; PROMPT - AGAIN -
     483
                                                 ;
     484
                                                           PARSE · RESPONSE ·
     485
     486
         003664
                   122711
                                                           CMPB.
                             000116
                                                 2$:
                                                                     #fN, (R1)
                                                                                         :N = NO
     487
          003670
                                                                     MTRTN:
#'Y,(R1)
MOVE
                   001435
                                                           BEQ.
                                                                                         ; NOT-ALL
         003672
     488
                    122711
                             000131
                                                           CMPB.
                                                                                         ;Y.=.YES
;OK, SET UP.FOR.ALL.
;MUST BE Y OR.A
     489 003676
490 003700
                   001403
                                                           BEQ.
                   304767
                             005244.
                                                           JSR
                                                                     PC.ERR2
     491
         003704
                   000753
                                                                                         ; PROMPT · AGAIN ·
     492
                                                           SET.UP.MEMORY.LIMITS.TABLE.FOR.CURRENT.TEST.COPY.REFERENCE.TABLE.TO.CURRENT.TABLE.(IE. TEST.
     493
     494
     495
                                                           MEMORIES OVER THEIR FULL RANGE).
     496
     497
          003706
                   012700
                                                 MOVE:
                                                           MOV
                                                                                         ;POINT TO REF TABLE : POINT TO CURRENT TABEL : NUMBER OF WORDS TO MOVE
                                                                     #LIMREF.RA
         003712
003716
     498
                   012701
                             0011501
                                                           MOV
                                                                     #CURL IM, R1
     499
                   012702
                             000014
                                                           MOV-
                                                                     #LIMHUM, R2
         003722
                   012021
     500
                                                 1::
                                                           MOV:
                                                                     (R0)+,(R1)+
     501
         003724
                   005302
                                                           DEI
                                                                     R2
     502.003726
                   001375
     503
     504
                                                           MOVE-ALL-OF-MEMORY-TEST-REFERENCE-TABLE-TO CURRENTATION
     505
                                                           TABLE:
     586
                   012700
012701
     507
          003730
                             0004601
                                                           MOV
                                                                     #MTREF,R0
                                                                                         : POINT - TO - REF - TABLE
          003734
     508
                             0007301
                                                                     #MTSUB,R1 ;POINT-TO-CURRENT-TABLE #<TESTS*MEM>,R2-;NUMBER-OF-WORDS
                                                           MOM
    509 003740
510 003744
                   012702
                             000110
                                                           MOV
                   012021
005302
                                                 2$:
                                                           MOV-
                                                                     (R0)+,(R1)+
     511
         003746
                                                           DEC
                                                                     R2 -
     512-003750
                    001375
                                                           BNE.
                                                                     2$
                                                                                         SET FLAG FOR ALL TESTS
    513
514
                                                           JUMP . TO . LOOP SELECTION
     515
    516 003752
                   052767
                             000010
                                       174044
                                                           ВІΞ
                                                                     #ALLTST, BASE
         003760
                   000167
                             001046
                                                           JMP
                                                                     LPRMPT.
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520
                                                         PROMPT FOR MEMORY SELECTION
521
522
523
                                                         IF RESPONSE IS < CR>, SELECT ALL MEMORIES
524
                                               MTRTN:
     003764
525
                                                                                        ;CLEAR MEMORY SELECT FLAG:
;PROMPT FOR MEMORY SELECTION
                                                         CLR
                                                                    SELECT-
526
     003764
                005067
                          174176
                                                                    PC.MEMSEL
PC.FIND
                                                          JSR
527 003770
528 003774
                          AA5230
                004767
                                                                                         :FIND MEMORY MNEMONIC IN COMMAND LINE
                004767
                                                          JSR
                          004274
                                                                    MEMTOP: ;A MNEMONIC: WAS FOUND:
#(A+B+C+I+O+T), SELECT: ;SET: ALL: MEMORIES: SELECTED
                                                                    MEMTOP
                                                          BCC
529
     004000
                103004
                          000077
                                    174156
                                                          BIS
530 004002
                852767
                                                                                         : NOW PROMPT FOR MEMORY LIMITS
                                                                    PL IM
                                                          BR
                000425
531 004010
 532
                                                          LOOP. TO PROCESS MEMORY MNEMONICS (THERE MAY BE MORE
533
                                                          THAN ONE IN THE COMMAND LINE) . EG:
534
535
 536
                                               MEMTOP:
 537
      004012
                                                                                         :MNEMONIC.LENGTH.MUST.BE.2
                                                          CMP
                                                                    #2,R0
                          000002
 538
539
     004012
                022700
                                                                                         ;OK, CONTINUE
                                                          REQ.
                                                                    2$
     004016
                001403
                                                                                         ; INVALID MNEMONIC
                                                                    PC,ERR3
                                                          JSR
 540
                           005120
      004020
                                                                                         ;START-OVER-WITH-PROMPT
                                                                    MTRTH-
 541
      004024
                000757
 542
543
                                                          MATCH: MEMORY MNEMONIC: AGAINST: A: TABLE: OF: VALID: MNEMONICS:
                                                          AND THEIR ASSOCIATED MEMORY FLAG SETTINGS.
 544
                                                :
 545
                                                                                         NUMBER OF VALID MEMORY MNEMONICS
                                                2$:
                                                          MOV
                                                                     #CHUM, RØ
                           000006
                R12700
 546
      004026
                                                                     #CTBL,R2
                                                                                         ; POINT TO TABLE UF MNEMONICS
; MATCH COMMAND LINE
                                                          MOV.
      004032
                012702
                           000430'
 547
                                                          JSR
                                                                     PC.SCAN
 548
      004036
                 004767
                           004140
                                                                     3$
                                                                                         OK, CONTINUE:
 549 004042
                 103003
                                                                     PC, ERR3
                                                          JSR
                           005074
 550
      004044
                 004767
                                                                                         :START-OVER
                                                          BR
                                                                     MTRTH -
      004050
                 000745
 551
 552
                                                          SUBRTH-SCAN-SETS-R1 -> FLAG:
LOOK-FOR-NEXT-MHEMONIC IN-COMMAND-LINE, IF THERE-IS-
ONE, PROCESS IT, IF-THERE-IS-NONE, FALL-THROUGH-TO-
PROMPT-FOR-MEMORY-LIMITS:
 553
 554
 555
 556
                                                                                          ;SET-FLAG-FOR-MEMORY-SELECTED:
;FIND-NEXT MEMORY MNEMONIC-IN-COMMAND LINE:
;SOMETHING-MORE-IS THERE:
 557
                                                                     (R1), SELECT:
      004052 051167
                            174110
                                                3$:
                                                           BIS:
 558
                                                                     PC.FIND.
                                                           JSR
                 004767
      004056
 559
                                                                     MEMTOP
                                                           BCC
       004062
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TMT------ M
               RO M1110 27-MAR-80 15:38 PAGE 12
                                            Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
     562
     563
     564
                                                                 PROMPT FOR MEMORY LIMITS: READ AND VERFIY THEM.
     565
     566
                                                                 SCAN-THE MEMORY-SELECT FLAG-WORD FROM POSITION @ TO-POSITION 5. FOR EVERY-MEMORY-WHOSE-FLAG-IS SET, CALL
     567
     568
     569
                                                                 SUBRTH 'LIMITS'.
     570
                                                      PL IM:
           004064
     572
           004064
                     012700
                                000001
                                                                 MOV.
                                                                                                 ;START:TESTING:WITH:FSA-A:
;POINT:TO:FIRST:PROMPT:MESSAGE
                                                                            #A,R0
                     012701
                                                                 MOV.
                                                                            #PMPTA,R1
#LIMREF,R2
     573
          994979
                                0112201
                                000700'
     574
          004074
                     012702
                                                                                                 POINT TO REFERENCE LIMITS TABLE : POINT TO CURRENT LIMITS TABLE : ** : LOOP COUNT = NUMBER OF MEMORIES :
                                                                 MOV
          004100
                     012703
                                0011501
                                                                 MOV
                                                                            #CURLIM.R3
          004104
                                                                 MOV
                                                                            #MEM, R4
     577
     578
          004110
                     939967
                                174952
                                                      15:
                                                                 BIT.
                                                                            R0.SELECT.
                                                                                                 ; WAS · MEMORY · SELECTED ·
           004114
     579
                     901437
                                                                                                 ;NO. BUMP.POINTERS
;SAVE.TEST BIT
;ADDR.OF PROMPT MESSAGE
                                                                 REQ
                                                                            5$
           004116
                                                                            R0,-(SP)
                     010046
                                                                 MOV
     581
          004120
                     010146
                                                                 MÖV
                                                                            R1,-(SP)
      582 994122
                                                                            (R2),-(SP)
2(R2),-(SP)
                                                                                                 :MOVE · UPPER · REF · LIMITS
:MOVE · LOWER · REF · LIMITS
                     011246
                                                                 MOV
           004124
                     016246
                                000002
                                                                 MOV
     584 004130
                     004767
                                 003646
                                                                 JSR
                                                                            PC, LIMITS.
     585 004134
                     012663
                                000002
                                                                 MOV
                                                                            (SP) + .2(R3)
                                                                                                 :MOVE-IN CURRENT-LOWER-LIMITS
      586
           004140
                                                                            (SP)+,(R3)
(SP)+,R1
                     012613
                                                                 MOV:
                                                                                                 :MOVE-IN CURRENT-UPPER-LIMITS :RESTORE POINTER-TO-PROMPTS-
     587
           004142
                     012601
                                                                 MOV
     588
           004144
                     012600
                                                                            (SP)+.R0
                                                                                                 RESTORE TEST BIT
      589
                                                                 INPUT-BUFFER AND-OUTPUT-BUFFER-INCREMENT-THEIR-ADDRESSES-BY 2. DO-NOT ALLOW-AN-ODD-ADDRESS-IN-
     590
     591
     592
                                                                 EITHER . THEIR LOWER . OR . UPPER . LIMITS .
      593
     594
           004146
                                                                                                 :CHECKING INPUT BUFFER:
:YES, DO NOT ALLOW ODD ADDRESS
                     032700
                               000010
                                                                 BIT
                                                                            #I.RA
     595
           004152
                      001003
                                                                            3$
     596
           004154
                     032700
                                000020
                                                                 BIT
                                                                            #0,R0
                                                                                                  ; CHECKING · OUTPUT · BUFFER
                                                                                                 :NO. SKIP.ODD.ADDRESS CHECK:
:IS-LOWER-LIMIT ODD ?:
:NO. CONTINUE:
           004160
                      001415
                                                                 BEQ
                                                                            5$
      598
           004162
                      032763
                                                                            #1,2(R3)
                                 000001
     599
           004170
                      001403
                                                                            4$
     600
           004172
                      004767
                                 004732
                                                                            PC.ERR6
                                                                 JSR.
                                                                                                 ;PROMPT-AGAIN-FOR-LIMITS-
;IS-UPPER-LIMIT ODD
;NO, CONTINUE-
      601
           004176
                      000747
                                                                 BR
                                                                            2$
          004200
004204
     692
                      032713
                                000001
                                                                            #1,(R3)
     603
                     001403
                                                                 BEQ
                                                                            5$
           004206
                     004767
                                                                 JSR
     604
                                 004716
                                                                            PC.ERR6
      605
           004212
                      000741
                                                                                                 : PROMPT - AGAIN
                                                                            2$
     606
607
           004214
004216
                      005304
001410
                                                                                                 ;FINISHED.7.
                                                      5$:
                                                                 DEC
                                                                            R4
      608
                                                                            ENDL IM-
                                                                 BEO
                                                                                                 :YES
           004220
                                                                                                  SHIFT TO TEST NEXT BIT
                      006300
                                                                 ASL
                                                                            RØ.
                                                                                                 BACK-UP PROMPT-ADDR-POINTER
      610
           004222
                      162701
                                 000004
                                                                 SUB
                                                                            #4,R1
                      062702
      611 004226
                                000004
                                                                 ADD
                                                                            #4.R2
                      862783
                                                                                                 :BUMP · CURRENT · POINTER
;TEST · NEXT
      612 - 004232
                                000004
                                                                 ADD
                                                                            #4,R3
     613 004236
                     000724
                                                                 BR
                                                                            1$
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TMT------ MACRO-M1:10 27-MAR-80 15:38 PAGE-13
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          615
          616
          617
                                                                                                                                  SELECT-TEST(S)
          619
                                                                                                                                PROMPT-FOR-TEST-NUMBERS: IF-THE-RESPONSE-IS-<CR>. (CARRAIGE-RETURN-ONLY), MOVE A-PSEUDO-COMMAND-LINE INTO-THE-COMMAND-LINE BUFFER: THIS-PSEUDO-LINE-CONSISTS-OF-THE-TEST-NUMBERS-FOR ALL-TESTS EXCEPT-TEST-10 (USER-PATTERN), PROCEED-TO-PROCESS THIS-LINE-AS-THOUGH-IT-WAS-ENTERED-FROM-THE-TERMINAL.
          628
          622
          623
          624
          626
                                                                                                                                                                                                                                                                                                                    ; =
          627
                     994249
                                                                                                           ENDL IM:
          628
                    004240
                                          004767
                                                                                                                                                                                                 :PROMPT:TO:SELECT:A:TEST:
:SCAN:COMMAND:LINE FOR A:TEST:NUMBER:
:FOUND:A TEST:NUMBER:
:POINT:TO:A:STRING WITH:ALL:TESTS:
                                                               004724
                                                                                                                                 JSR
                                                                                                                                                      PC.SELTST.
PC.FIND.
                     004244
                                          004767
                                                                004024
                                                                                                                                  JSR
                                           103021
          630
                    004250
                                                                                                                                 BCC
                                                                                                                                                      SELOOP -
          631
                    004252
                                          012700
                                                                000401
                                                                                                                                 MOM
                                                                                                                                                       #ALLSTR,R0
          632 - 004256
                                          012791
                                                                0000321
                                                                                                                                                                                                  POINT TO COMMAND BUFFER
                                                                                                                                 MOV
                                                                                                                                                      #GCMBUF,R1
                    004262
                                          012702
                                                               000027
                                                                                                                                                                                                 GET LENGTH OF STRING
SIMULATE ASKING FOR ALL TESTS
                                                                                                                                  MOV
                                                                                                                                                       #STRLEN, R2
          634
                    004266
                                           112021
                                                                                                                                 MOVB
                                                                                                                                                       (R0) + (R1) +
          635
                    йй427й
                                          005302
                                                                                                                                 DEC
                                                                                                                                                      R2.
          636
                    004272
                                          001375
                                                                                                                                 BNE
                                                                                                                                                      1$
                    004274
                                          012767
                                                                000027 -
                                                                                     173652
                                                                                                                                                                                                 #MOVE LENGTH OF SIMULATED STRING FOR STRING 
                                                                                                                                 MOV
                                                                                                                                                       #STRLEN, GCMLEN
                                                                000032
          638 004302
                                          012767
                                                                                     173646
                                                                                                                                 MON
                                                                                                                                                       #GCMBUF,GCMPNT
          639
                   004310
                                          004767
                                                                                                                                 JSR.
                                                                                                                                                      PC.FIND.
         640
         641
                                                                                                                                 PROCESS: ONE: TEST: NUMBER: AT: A: TIME, FIRST: VALIDATE
          642
                                                                                                                                 THE · NUMBER .
         643
644
                   004314
                                                                                                           SELOOP:
         645
                   004314
                                          022700
                                                               000002
                                                                                                                                                      #2,R0
                                                                                                                                                                                                  :TEST-NUMBERS-ARE-1 BYTE-EACH
                    004320
                                          002416
                                                                                                                                 BLT.
                                                                                                                                                      SERR
                                                                                                                                                                                                  ; NO - GOOD
         647
                    004322
                                          003007
                                                                                                                                                      1$
#*1,(R1)+
                                                                                                                                 BGT.
                                                                                                                                                                                                  ;SINGLE DIGIT, PROCESS IT
         648 004324
649 004330
                                          122721
                                                                                                                                 CMPB
                                                                                                                                                                                                  :TENS DIGIT?
                                          001012
                                                                                                                                                                                                 #MUST-BE 1
#LOAD-1'S-DIGIT-
#ADD-VALUE-OF-TENS DIGIT-
#AND-CONTINUE-
                                                                                                                                 BNE -
                                                                                                                                                      SERR
         650
                   004332
                                                                                                                                                      (R1).R3
                                          111103
                                                                                                                                 MOVE
         651 004334
                                          062703
                                                               000012
                                                                                                                                                      #10..R3
                                                                                                                                 ADD.
         652.004340
                                          000401
         653
         654
                                                                                                                                TRANSLATE SINGLE DIGIT FROM ASCII DECIMAL TO BINARY. IF A ZERO VALUE IS RETURNED FROM THE TRANSLATION. THE ASCII CHARACTER IS INVALID.
         656
         657
         658
                   004342
                                                                                                                                MOVB
                                                                                                                                                                                                 ;LOAD-TEST-NUMBER-(ASCII)
;POINT-TO-TRANSLATE-TABLE
;ADD-VALUE-OF-ASCII-NUMBER
;MOVE-BINARY-VALUE FROM-TABLE
;SOMETHING-WAS THERE-
                                          111103
                                                                                                           1$:
                                                                                                                                                      (R1),R3
                   004344
                                          012704
                                                               000202
                                                                                                           TRT:
                                                                                                                                MOV.
                                                                                                                                                      #TROCT,R4
         668
                   004350
                                          060304
                                                                                                                                ADD.
                                                                                                                                                     R3.R4
(R4).R3
         661
                   AA4352
                                         111493
                                                                                                                                MOVB
                  004354
         662
                                         001012
                                                                                                                                BNE
         664
                                                                                                                                \label{local-condition} INVALID \cdot \text{CHARACTER: PUT OUT-MESSAGE: CLEAR \cdot CURRENT \cdot JUMP TABLE \cdot AND \cdot GO - BACK \cdot TO \cdot PROMPT \cdot AGAIN.
         665
         666
         667
                   004356
                                         004767
                                                                                                                                JSR
                                                                                                          SERR:
                                                                                                                                                      PC.ERR7
        668 004362
                                        012700
012701
                                                              0007301
                                                                                                                                                      #MTSUB,R0 =:ROINT TO #KTSUB,R0 #KTESTS*MEM>,R1 ;LOAD NUMBER OF WORDS IN TABLE
                                                                                                                                MOV
                  004366
        669
                                                              000110
                                                                                                                               MOV.
        670 004372
                                        005020
                                                                                                                                                      (R0) +
                                                                                                          3$:
                                                                                                                                                                                                 :RESET TABLE
        671 004374
                                         005301
                                                                                                                                DEC
                                                                                       Approved For Release 2005/07/11 CIA-RDP85-00514R000200020001-3
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             O-M1110
672 - 004376
                   001375
                                                                        BNE
673 004400
                   000717
                                                                        BR
                                                                                     ENDL IM-
                                                                                                               :TRY-AGAIN-
674
                                                                        IF TEST-NUMBER: =-6 OR-10, SET-A-FLAG-FOR LATER-ACTION.
675
676
677
678 004402
                                                           ZREL:
                    122703
                                000012
                                                                        CMPB
                                                                                     #10..R3
                                                                                                               :TEST-10 (USER-TEST-PATTERN)
                                                                                                               ;NO, DO NOT PROMPT

;PROMPT FOR TEST PATTERN (LATER);

;TEST 6 (CROSS TALK);

;NO, DO NOT PROMPT;

;SET FLAG FOR LIMITS CHECK LATER
680 004406
                   001003
                                                                        BNE -
                                                                                     1$
681 004410
                   052767
                                 000004
                                             173406
                                                                                      #TEST10,BASE
682 004416
                   122793
                                000006
                                                                        CMPB
                                                                                      #6,R3
683 004422
                   001003
                                                                        BNE .
                                                                                     2$
684 004424
                   052767
                                 000002
                                                                        BIS
                                                                                      #TEST6.BASE
685
686
                                                                       MAKE-TEST-NUMBER-ZERO-RELATIVE. MULTIPLY-THE-ZERO-RELATIVE. TEST-NUMBER-BY-THE-NUMBER-OF-MEMORIES-X-2-TO GET-A-BYTE-OFFSET-INTO-THE-REFERENCE-TABLE-AND-CURRENT-JUMP TABLE. FOR-EXAMPLE, IF-THE-ASCII-TEST NUMBER-WAS-2, THE-ZERO-RELATIVE-NUMBER-IS-1. THIS NUMBER-IS-MULTIPLIED-BY-12-TO-GET-A-BYTE-OFFSET-=-12.
687
688
689
691
692
693
694
                                                                        ADD: THE: PRODUCT: TO: THE START: ADDRESS: OF: THE: CURRENT: JUMP-TABLE: AND: PUT: THE: RESULT: IN: R0. ADD: THE: SAME: PRODUCT TO: THE: START: ADDRESS: OF: THE: REF: TABLE: AND: PUT: THE: RESULT: IN:
695
696
697
                                                                        Ri. THE RESULTS ARE:
698
699
                                                                        CURRENT-JUMP TABLE-(ASSUMING-TEST-2-SELECTED)
700
                                                                                     0.0.0.0.0.0
                                                                        . WORD
701
                                                                        .WORD
782
703
                                                                        REFERENCE - TABLE
704
                                                                        .WORD
                                                                                     T1.T1.T1.T1.T1.T1
705
                                                                         .WORD
                                                                                     T2, T2, T2, T2, T2, T2
706
                                                                        RØ -> FIRST-Ø IN-THE-SECOND-LINE FOLLOWING "CURRENT-JUMP-TABLE" R1 -> FIRST-T2-IN-THE-REFERENCE-TABLE.
707
708
709
710
711
      004432
                   005303
                                                           2$:
                                                                        DEC
                                                                                     R3
                                                                                                               :MAKE NUMBER ZERO RELATIVE:
:SYSTEM SUBRTH EXPECTS MULTIPLICAND IN R1
:AND MULTIPLIER IN R0
712 · 004434
713 · 004436
                   010301
                                                                                     R3.R1
                                                                        MOV
                   012700
                                 000014
                                                                        MOV
                                                                                     #<MEM*2>,R0
714 004442
                                 000000G
                   004767
                                                                        JSR
                                                                                     PC.$MUL
715 004446
716 004450
                   010103
                                                                                                               ;MOVE·PRODUCT·TO·R3
;POINT·TO·JUMP·TABLE·
                                                                        MGM
                                                                                     R1.R3
                   012700
                                 0007301
                                                                                     #MTSUB,R0
717 004454
                   1060300
                                                                        ADD.
                                                                                     R3,R0
                                                                                                               :ADD OFFSET
718 004456
                   012701
                                 000460
                                                                        MOV
                                                                                     #MTREF,R1
                                                                                                               :TABLE:WITH:ALL:SUBRTN:ADDRESSES:(REFERENCE)
719 004462
720
                   060301
                                                                                     R3.R1
                                                                        ADD
721
                                                                        DEPENDING UPON WHICH MEMORIES HAVE BEEN SELECTED FOR TESTING, MOVE ADDRESSES OF ROUTINES THAT GOVERN TESTS FROM THE REFERENCE TABLE TO THE JUMP TABLE (MTSUB), START TESTING THE MEMORY.
723
724
                                                                        SELECT FLAG AT POSITION 0 (FSA-A).
725
                                                                        PROCEEDING WITH THE ABOVE EXAMPLE ASSUMING IN ADDITION THAT FSA-B WAS THE MEMORY SELECTED. THIS ROUTINE WOULD FILL
726
727
728
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729
730
731
732
733
8084464
734
808477
736
8084500
737
8084502
738
8084504
739
8084506
740
8084510
741
8084512
742
742
743
744
745
746
747
8084514
                                                                                .WORD
                                                                                             0,0,0,0,0,0
                                                                                .WORD
                                                                                             0.T2.0.0.0.0
                      012702
                                    000001
                                                                               MOV.
                                                                                              #A,R2.
                                                                                                                          :START WITH FSA-A
                      012703
                                    000006
                                                                               MOV.
                                                                                              #MEM.R3
                                                                                                                          ;TOTAL · NUMBER · OF · MEMORIES
:WAS · MEMORY · SELECTED ·
                      030267
                                    173466
                                                                 3$:
                                                                                              R2, SELECT
                      001401
                                                                               BEQ
                                                                                              4$
                      011110
                                                                                              (R1).(R0)
                                                                               MOV
                                                                                                                          :MOVE FROM REF TO CURRENT
:BUMP POINTERS
:SHIFT TO TEST NEXT BIT
                      022120
006302
                                                                 4$:
                                                                               CMP
                                                                                              (R1)+,(R0)+
                                                                               ASL DEC
                                                                                             R2
R3
                      005303
                                                                                                                          :FINISHED ?
                      001370
                                                                               BNE
                                                                                              3$
                                                                               TRANSFERS-BETWEEN-REF-TABLE-AND-CURRENT-JUMP-TABLE-ARE-COMPLETE-FOR ONE-TEST-NUMBER, NOW-SCAN-THE COMMAND-LINEFOR-THE-NEXT TEST-NUMBER.
        004514
                                                                                                                          FIND NEXT TEST REQUEST IN COMMAND LINE PROCESS IT
                      004767
                                    003554
                                                                               JSR
                                                                                             PC.FIND
SELOOP
 748 004520
                      103275
                                                                               BCC
```

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750
751
752
                                                                   FINISHED WITH COMMAND LINE FOR TESTS.
753
754
755
                                                                   PROMPT FOR TEST PATTERN (IF TEST 10 WAS SELECTED).
756
     004522
                                                                                #TEST10,BASE
                  032767
                              000004
                                                                                                        :WAS TEST 10 SELECTED
                                                                                                        :NO. SKIP ALL THIS
:PROMPT
757
     004530
                  001421
                                                                                T6CHK
758 004532
                  004767
                              004426
                                                       PMPT10:
                                                                   JSR.
                                                                               PC.USRTST
759
     004536
                  004767
                              003532
                                                                    JSR.
                                                                               PC.FIND.
                                                                                                        :FIND A NON-BLANK IN COMMAND LINE.
760
      004542
                   103003
                                                                   BCC
                                                                                1$
                                                                                                        :OK, CONTINUE.
76 i
      004544
                  004767
                              004350
                                                                    ĴŝŔ
                                                                                PC.ERR8
762
     004550
                  900770
                                                                   BR
                                                                                PMPT10
                                                                                                        :TRY-AGAIN
      004552
                  004767
                              003634
                                                       1$:
                                                                    JSR
                                                                                PC.PACK
                                                                                                        CONVERT TEST PATTERN TO BINARY
764 004556
                   103003
                                                                   BCC
                                                                                2$
                                                                                                        :CONVERSION.OK.
765
     004560
                  004767
                              004334
                                                                    JSR
                                                                                PC.ERR8
766
      004564
                  000762
                                                                   BR
                                                                                PMPT10
767
                  016767
                                                                   MOV
                                                                                BINUD, MT10
                                                                                                        ;PUT PATTERN-IN A-SAFE-PLACE
768
769
                                                                   770
 775
      004574
776
      004574
                  032767
                              000002
                                          173222
                                                                   BIT
                                                                                #TEST6,BASE
                                                                                                        :WAS TEST 6 SELECTED
      004602
                  001476
                                                                   BEQ
                                                                                CHECK®
                                                                                                        ;NO, SKIP AROUND
      004604
                                                                                R1 ;START-PLACE-HOLDER-VALUE = 0
#MTSUB+<5*<MEM*2>>,R0 ;POINT-TO-TEST-6 ADDRESSES
#MEM,R2- ;LOOP-COUNT-=-NUMBER-OF-MEMORIES
                                                                   CLR
                                                                               R1
779 004606
                  012700
                              0010241
                                                                   MOV
 780 004612 012702
                              999999
781
                                                                   FOR EACH MEMORY TO COME UNDER TEST 6, CHECK WHETHER THE MEMORY LIMITS ARE COMPATABLE WITH THE TEST, TEST 6 REQUIRES AT LEAST THREE MEMORY LOCATIONS IN ORDER TO
782
783
 784
 785
                                                                   WORK · CORRECTLY.
 786
 787
 788
                                                          **************
 789
                                                                                                                                                           <del>-8</del>7 27
                                                                   HOW TEST 6 WORKS. RATIONALE BEHIND 3 LOCATION RULE.
                                                                                                                                                            1.00
 791
                                                                   TEST-6 CLEARS MEMORY FROM THE LOWER TO THE UPPER LIMIT, IT THEN WRITES ALL 1'S IN THE FIRST LOCATION AND EVERY OTHER LOCATION TO THE UPPER LIMIT, IT THEN READS ZEROS FROM THE LOCATIONS INTO WHICH IT DID NOT WRITE 1'S, IT THEN BUMPS THE LOWER LIMIT BY ONE MEMORY INCREMENT (VALUE VARIES DEPENDING UPON THE MEMORY), IT CLEARS MEMORY TO THE UPPER LIMIT, IT WRITES 1'S INTO THE NEW LOWER LIMIT AND EVERY OTHER LOCATIONS TO THE UPPER LIMIT; IT READS ZEROS FROM THE LOCATIONS INTO WHICH IT DID NOT WRITE 1'S, THREE MEMORY LOCATIONS ARE THE MINIMUM ON WHICH TEST-6 CAN WORK;
 792
 794
 795
 797
 798
 799
80 i
882
                                                                    TEST-6 CAN-WORK:
803
                                                                   WRITE: 1'S: INTO: LOCATIONS: 0 AND: 2
895
                                                                   READ ZEROS FROM LOCATION 1
806
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     807
                                                                 000000
     808
                                                                 177777
     809
                                                                 BUMP · LOWER · LIMIT · TO · 1
                                                                CLEAR LOCATIONS 1 AND 2 -
WRITE 1'S INTO LOCATION 1
     811
     812
813
                                                                 READ · ZEROS · FROM · LOCATION · 2
     814
     815
     816
                                                                 000000
     818
819
                                                        **********
     820
                                                                CHECK-EACH-NON-ZERO-TEST-6 ENTRY IN-THE-CURRENT-JUMP TABLE, FOR-EACH-NON-ZERO-ENTRY, SET-UP-IN-R4 THE-MEMORY-INCREMENT VALUE-X-2-(IE, THE-MINIMUM-SPREAD-FOR-TEST 6). BASIC VALUES:
     821
     822
     823
      824
      825
                                                                 FSA-A
     826
                                                                FSA-B-
      827
                                                                 INPUT
                                                                           2
                                                                                                                                                 829
                                                                 OUTPUT.
                                                                                                                                               830
                                                                                                                                           , m., .
                                                                 BTRANS-
      831
           004616
                      005710
                                                                            (RØ)
                                                                                                 :TEST-6 SELECTED-FOR-THIS-MEMORY.*
                                                                 TST
                                                                                                 :NO. SKIP CHECK
:BYTE TRANSLATOR
      833
           004620
                      001414
                                                                            2$
           004622
      834
                      R227R1
                                000005
                                                                 CMP
                                                                            #5,R1
      835
           004626
                      001003
                                                                 BNE
                                                                            1$
      836
           004630
                      012704
                                000002
                                                                 MOV
                                                                            #2,R4
                                                                                                 ; VALUE · X 2
      837
           004634
                      000416
                                                                 BR
                                                                            4$
      838
           004636
                      922791
                                000004
                                                                 CMP
                                                                            #4.R1
                                                                                                 ; OUTPUT · BUFFER
           004642
      839
                      001003
                                                                 BNE
                                                                            2$
      840
           004644
                      012704
                                000004
                                                                 MOV
                                                                            #4,R4
                                                                                                 ; VALUE · X 2
      841
           004650
                      000410
                                                                            4$
      842 - 004652
                      022701
                                000003
                                                      2$:
                                                                 CMP
                                                                            #3,R1
                                                                                                 : INPUT BUFFER
           004656
      843
                      001003
                                                                 BNF
                                                                            3$
      844
           004660
                      012704
                                000004
                                                                 MOV:
                                                                            #4.R4
                                                                                                 : VALUE · X 2 ·
      845
           004664
                      000402
                                                                 BR
                                                                            4$
      846
           004666
                      012704
                                000002
                                                      3$:
                                                                 MOV
                                                                            #2.R4
                                                                                                 ; VALUE · X 2 · FOR · FSA'S ·
      847
                                                                USE-THE-PLACE-HOLDER-VALUE-AS-AN INDEX-INTO-THE-CURRENT-LIMITS-TABLE (AFTER-SHIFTING-FOR DOUBLE-WORD-OFFSET). THEN-CHECK-THE-RELATIONSHIP BETWEEN-LOWER-AND-UPPER-LIMITS.
      848
      849
      858
      851
                                                                                                                                             AND THE PERSON
      852
           004672
                      010103
                                                      4$:
                                                                 MOV:
                                                                            R1,R3
                                                                                                 ;SHIFT-IN-ANOTHER-REG-
           004674
      853
                      006303
                                                                 ASL:
                                                                            R3
                                                                           004676
      854
                      006303
                                                                 ASL
      855
           004700
                                0011521
                      066304
                                                                 ADD
           004704
                                                                 CMP
      856
                      026304
                                0011501
      857
           004710
                      103026
                                                                 BHIS
     858
                                                                FAILED CHECK, CLEAR THE ENTRY IN THE CURRENT JUMP TABLE AND REPORT TO THE CONSOLE, RISE BLOCK HOLDER MALLE THE VALUE IS USED AS AN INDEX INTO A HABLE OF MEMORY NAMES
     859
     860
      861
     862
                                                                 (AFTER MULTIPLYING THE VALUE BY 6. THE LENGTH OF EACH
                                                                 NAME)
     863
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864
865 004712
              005010
                                                     CLR
                                                               (RØ)
                                                                                  :CLEAR TEST 6 ADDRESS FROM CURRENT TABLE
    004714
866
              ð10046
                                                               R0.-(SP)
R1.-(SP)
                                                     MOV
                                                                                  :SAVE POINTER
867
    004716
              010146
                                                     MOV
                                                                                  :SAVE PLACE-HOLDER VALUE
868 004720
              004767
                        004154
                                                               PC.ERR12
                                                                                  PRINT GENERAL ERROR MESSAGE
LENGTH OF MEMORY NAMES
    004724
869
              012700
                        000006
                                                     MOV
                                                               #6..R0
                        000000G
870
    004730
              004767
                                                               PC,$MUL
#FTBL,R0
#6..R1
                                                     JSR
                                                                                  GET OFFSET INTO MEMORY NAME TABLE (ROXR!)
871
    004734
              012700
                                                     MOV
                                                                                  POINT TO MEMORY NAME TABLE
NUMBER OF CHARS IN NAME
POINT TO PRINT LINE
872 - 994749
              012701
                        000006
                                                     MOV
873 004744
              012705
                        001465
                                                     MOV
                                                               #PRINT, R5
874 004750
              112025
                                           5$:
                                                     MOVB
DEC:
                                                               (R0)+,(R5)+
                                                                                  :MOVE · NAME · TO · PRINT · LINE
875 004752
876 004754
              005301
                                                               R1
              001375
                                                     BHE
                                                               5$
877
    004756
              004767
                        003720
                                                     JSR
                                                               PC,CONSOL
                                                                                  ; WRITE · MEMORY · IN · ERROR
878 004762
              012601
                                                     MOV
                                                               (SP)+_*R1
879 004764
              012600
                                                               (SP)+,R0
                                                     MOV
889
881
                                                     PREPARE TO CHECK NEXT TEST 6 ENTRY.
883 004766
              005201
                                           6$:
                                                     THC
                                                                                  ;BUMP · MEMORY · PLACE-HOLDER · VALUE
884 004770
885 004774
                                                                                  POINT TO NEXT TEST 6 ADDRESS
SUB-FROM LOOP COUNT
              062700
                        000002
                                                     ADD:
                                                               #2,R0
              005302
                                                               R2
    004776
              001307
                                                     BNE
                                                               CHECK -
887
888
889
                                                     MAKE-SURE-THAT-THE-*CURRENT JUMP TABLE: IS NOT EMPTY
890
891
892-005000
                                           CHECK0:
    005000
              012700
                        0007301
                                                     MOV.
                                                               #MTSUB,R0
                                                                                  ; POINT . TO . CURRENT . TABLE
                                                               #MTSUB.RU ; PUINT TO CORREST THEE ENTRIES TO CRO) + (R0) + (IS A TABLE ENTRY PRESENT)
894 005004
              012701
                        000110
                                                     MOV
895 005010
              005720
                                                     TST.
896
    005012
              001007
                                                               LPRMPT
                                                                                  :YES. EXIT THIS ROUTINE
897
    005014
                                                                                  : SUB FROM ROUTINE COUNT.
              005301
                                                     DEC
                                                               R1
    005016
              001374
                                                     BNF
                                                               1 #
                                                                                  :TRY-NEXT-POSITION
899 005020
              004767
                        004060
                                                     JSR
                                                               PC.ERR11
                                                                                  EXECUTION IMPOSSIBLE
900
                                                                                               ···· . #
    005024
                                                     EXIT$S
     005024
              012746
                                                               (PC) + . - (SP)
                                                     MOV.
    005026
                  963
                            001
                                                      .BYTE
                                                               51..1
    005030
              104377
                                                     EMT
                                                               ↑0<377>
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TMT----- P

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     903
     904
     905
                                                                PROMPT FOR LOOP ON TEST
     906
     907
     908
                                                                 RESPONSES:
                                                                                      - CARRAIGE RETURN, LOOP ON TÉSTS.
     909
                                                                 <CR>>
                                                                                      - YES, LOOP ON TESTS,
- NO. ONE MEMORY TEST CYCLE ONLY,
- NUMBER OF CYCLES TO EXECUTE.
     910
     911
     912
                                                                 NUMERIC: VALUE:
     913
914 005032
                                                      LPRMPT:
     915 005032
                     004767
                                004122
                                                                           PC.LPTST
                                                                 JSR
                                                                                                 : PROMPT
                                                                           PC.FIND
                                                                                                 #FIND RESPONSE IN COMMAND LINE 
#OK RESPONSE FOUND 
#CR RESPONSE MEANS LOOP
     916
          005036
                     004767
                                003232
                                                                 JSR
     917 005042
                      103004
                                                                 BCC
                                                                            1$
     918 005044
919 005052
920
                     052767
                                000001
                                           172752
                                                                 BIS
                                                                            #LOOP,BASE
                     000442
                                                                 BR
                                                                           ERPRMT.
                                                                                                 ; AND . CONTINUE .
     921
          005054
                      122711
                                000131
                                                      1$:
                                                                 CMPB
                                                                            #*Yx(R1)
                                                                                                 :YES-- LOOP-ON_TESTS: .
:TRY-'N'
     922-005060
923 005062
                     001004
                                                                 BHE
                                                                           2$
                                                                            #LOOP,BASE
                     852767
                                000001
                                           172734
                                                                 BIS.
                                                                                                 :SET-FLAG-FOR-LOOP
     924
          005070
                     000433
                                                                 BR
                                                                           ERPRMT.
                                                                                                 :PROMPT FOR ERROR OPTIONS :NO - DO NOT LOOP ON TESTS
     925 005072
                      122711
                                                                 CMPB
                                                                            #'H, (R1)
     926 005076
                     001004
                                                                 BNE
                                                                            3$
                                                                                                 ;NO, TEST FOR LOOP COUNT
     927
          005100
                                000001
                                           172716
                                                                            #LOOP, BASE
                     042767
                                                                 BIC
                                                                                                 ;CLEAR · LOOP · FLAG ·
     928
          005106
                     000424
                                                                           ERPRMT.
     929
     930
                                                                ASSUME THAT THERE IS AN ASCII DECIMAL VALUE IN THE COMMAND LINE, CONVERT IT TO BINARY AND STORE.
     931
     932
     933 005110
934 005112
                                                                                                 :POINT-1 PAST-STRING:
:BUMP-FOR-STUPID-SYSTEM-SUBRTN:
:SAVE-FOR-LATER-COMPARISON
:MOVE-POINTER-TO-RØ FOR-SYSTEM-SUBRTN:
:CONVERT DECIMAL-TO-BINARY-
                     969199
995299
                                                      3$:
                                                                 {\tt ADD}
                                                                           R1.R0
                                                                 INC
                                                                           RA.
     935
          005114
                      010046
                                                                 MOV
                                                                           R0,-(SP)
     936 005116
                      010100
                                                                            RIJRØ
                                                                 MOV
     937
          005120
                      004767
                                000000G
                                                                 JSR
                                                                            PC,$CDTB
     938
          005124
                      020026
                                                                 CMP
                                                                                                 ;WHOLE STRING CONVERTED ; YES, CONTINUE:
                                                                           R0.(SP) +
     939
          005126
                      001403
                                                                 BEQ
                                                                            4$
     940 005130
                      004767
                                003760
                                                                 JSR
                      000736
     941 005134
                                                                 BR
                                                                            LPRMPT-
                                                                                                 :PROMPT-AGAIN-
     942 - 005136
                      010167
                                 173022
                                                                 MOV
                                                      4$:
                                                                           R1,LOOPCT
                                                                                                 ;SAVE - LOOP - COUNT -
          005142
                      001003
                                                                 BNE
                                                                            5$
     944 005144
                      004767
                                                                 JSR
                                                                            PC, ERR9
     945 005150
                     000730
     946 005152-
                                000001
                     052767
                                           172644
                                                      5$:
                                                                 BIS
                                                                            #LOOP, BASE
                                                                                                 :SET-LOOP-FLAG
```

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948
949
950
                                                       PROMPT FOR ERROR OPTIONS
951
952
953
                                                       RESPONSES:
                                                                           - CARRAIGE RETURN. DISPLAY ALL ERRORS.
954
                                                       <CR>>
                                                                          - HALT. STOP TESTS AFTER 1ST ERROR.
- PRINT ONLY THIS NUMBER OF ERROR MESSAGES
BUT CONTINUE (1975)
- PRINT THIS NUMBER OF ERROR MESSAGES AND HALT.
955
956
                                                       NUMER IC - VALUE
957
958
                                                       N. VALUE + H
959
                                             ERPRMT:
960 005160
961
     005160
               004767
                         003770
                                                       JSR
                                                                 PC, EROPT
                                                                                     :PROMPT FOR OPTIONS
    005164
               004767
                                                                 PC.FIND
                                                                                     :FIND RESPONSE
963
     005170
               103445
                                                       BCS
                                                                 MTSET.
                                                                                     :<CR> - DEFAULT-TO 'DISPLAY'
964
                                                       CMPB
965
     005172
               122711
                         000110
                                                                 #*H,(R1)
                                                                                     ;HALT-AFTER-1 ERROR-
                                                                                     SET FLAG FOR HALT
966
     005176
               001007
                                                       BHE.
                                                                 1$
967
     005200
               052767
012767
                         000020
                                   172616
                                                       BIS
                                                                 #HALT, BASE
968 005206
                                                                 #2,ERLIM
                         000002
                                   172600
                                                       MOV.
                                                                                     :PRINT ONLY 1-ERROR MESSAGE
     005214
               000433
                                                                 MTSET.
970
                                                       ASSUME AN ASCII DECIMAL VALUE IN THE COMMAND LINE. CONVERTAND STORE.
971
973
974 005216
975 005220
               060100
005200
                                             1$:
                                                       ADD.
                                                                 R1.R0
                                                                                     :POINT-PAST-STRING IN-COMMAND-LINE
                                                       INC
                                                                                     ;BUMP · FOR · STUP ID · SYSTEM · SUBRTN · ;SAVE · FOR · LATER · COMPARISON
                                                                 RΘ
976
     005222
               010046
                                                       MOV
                                                                 R0,-(SP)
977
     005224
               010100
                                                       MOV
                                                                 R1.R0
                                                                                     ;PREPARE TO-CONVERT
                                                                 PC,$CDTB.
978 005226
                         ВВВВВВВВ
               004767
                                                       JSR
     005232
979
               020026
                                                       CMP
                                                                                     :ENTIRE - STRING - CONVERTED
                                                                 R0.(SP) +
980 005234
               001403
                                                       BEQ.
                                                                 2$
                                                                                     :YES:
981 005236
               004767
                                                       JSR
                                                                 PC.ERR10
982-005242-
               000746
                                                       BR
                                                                 ERPRMT
                                                                                     :TRY-AGAIN-
983
                                                       LOOK-FOR-AND 'H' AFTER THE ASCII OCTAL VALUE.
984
985
                                                                                     :NUMBER OF ERROR MSGS TO PRINT
:ADJUST FOR PRE-DECREMENT
:SCAN COMMAND LINE
:NOTHING ELSE THERE
                         172544
172540
986
     005244
               010167
                                                       MOV
                                                                 R1.ERLIM
987
     005250
               005267
                                                       THE
                                                                 FRI IM-
     005254
               004767
                         003014
                                                       JSR
                                                                 PC.FIND.
989 005260
               103411
                                                       BCS
                                                                 MTSET.
998 885262
               122711
                         000110
                                                       CMPB
                                                                 #*H<sub>*</sub>(R1)
                                                                                     :HALT-AFTER-MESSAGE-COUNT-EXHAUSTED-
991 005266
               001403
                                                       BEQ.
                                                                 4$
                                                                                     ; YES
992-005270
               a04767
                         003614
                                                       JSR
                                                                 PC.ERR10
                                                                                     ;BAD OPTION
993 005274
               000731
                                                       BR
                                                                 ERPRMT.
                                                                                     :TRY-AGAIN-
995 005276
               052767
                         000020
                                                       BIS.
                                                                 #HALT, BASE
                                                                                     :SET-HALT-FLAG
```

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997
 998
                                                                 PREPARE TO ENTER MAIN LOOP
 999
1000
1001
                                                                 INITIALIZE CURRENT JUMP TABLE POINTER AND COUNTER ADJUST FOR PRE-DOREMENT OF COUNT, PRE-INCREMENT OF POINTER
1992
1003
1004
1005 005304
                                                      MTSET:
                                                                             #MTSUB-2,MTPNT ;SET-UP-POINTER-TO JUMP-TABLE-
#<TESTS*MEM>+1,MTCNT ;AND-NUMBER-OF-JUMP-TABLE-ENTRIES
                                                                 MOV.
                              0007261
                                          172656
1006
      005304
                  812767
      005312
                  012767
                                          172652
                                                                 MOV.
1007
                              000111
                                                                                                     :RESET.TD.
1008 005320
                  012767
                              000000
                                          176376
                                                                              #0.TD$SU-
1009
                                                                 THE STOP MESSAGE SAYS 'ENTER ANY CHARACTER TO STOP TEST(S)', ACTUALLY THE CHARACTERS W. P. C. AND TARE SPECIAL IN THAT THEY ALLOW THE RUN TO CONTINUE AFTER THE PRINTING OUT OF STATUS INFORMATION. SEE THE ROUTINE AST.
1010
1011
1012
1913
1014
                                                                              PC.BEGTST: ;PUT:OUT START:TEST:MESSAGE:
PC.STOP: ;GIVE:DIRECTIONS FOR STOPPING:TEST:
#IO:ATA.#LUN:TT.,,,</#AST>
1015 005326
1016 005332
                                                                  TSR
                  994767
                              993536
                                                                             PC,BEGTST.
                                                                  JSR
                                                                             PC,STOP
                  004767
                              003526
       005336
                                                                  QIO$S
                   005046
                                                                 CLR.
       005336
                                                                              -(SP)
       005340
                                                                              -(SP)
                   005046
       005342
                   005046
                                                                  CLR
                                                                              -(SP)
                                                                 CLR -
       005344
                   005046
                                                                             -(SP)
                                                                                                                                                            7
       005346
                   005046
                                                                              -(SP)
       005350
                   012746
                                                                  MOV
                               0072061
                                                                              #AST,-(SP)
       005354
                                                                              -(SP)
                                                                              -(SP)
       005356
                   005046
                                                                  CLR
                                                                  CLR
       005360
005362
                                                                              -(SP)
                   005046
                                                                              #LUN.TT,-(SP)
#IO.ATA,-(SP)
                   012746
                               000001
                                                                  MOV.
                   012746
                                                                  MOV.
       005366
                               000000G
       005372
                   012746
                                                                  MOV-
                                                                              (PC) + * - (SP)
                                                                              1,12.
↑0<377>
                                                                   .BYTE
       005374
                       00 i
                                   014
                   104377
       005376
                                                                  FMT.
```

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R0 M1110 27-MAR-80 15:38 PAGE 13 Release 2005/07/1 CIA-RDP85-00514R000200020001-3
1019
1020
                                                               MAIN-LOOP-OF MEMORY-TEST-FUNCTION-
1021
1922
1023
                                                               CHECK FOR THE HALT OPTION, IF THE OPTION IS
ON, CHECK TO SEE WHETHER ANY ERRORS HAVE OCCURRED.
IF THEY HAVE (AND THE HALT COUNT IS EXHAUSTED).
1024
1825
1826
                                                                TERMINATE THE TESTS.
1027
                                                    MTMAIN:
       005400
1029
                                                               BIT
                                                                           #HALT, BASE
                                                                                                 ; HALT · AFTER · ERROR ·
      005400
                  032767
                             000020
1030
                                                                                                 :NO
1031
       005406
                  001413
                                                               BED
                                                                           15
                                         172496
                                                                           #ERROR,BASE
                                                                                                 ; HAS - AN - ERROR - OCCURRED
                                                                BIT
1032
      995419
                  032767
                             999949
                                                                           1$
                                                                                                 ;NO-
                  001407
1833
       005416
                                                                                                 ; IS - REMAINING - PRINTOUT - COUNT
                              172370
                                         000001
                                                                CMP
                                                                           ERLIM,#1
       005420
                  026727
1034
                                                                                                 :NO. CONTINUE:
:PUT:OUT HALT:MESSAGE
1035 005426
                  003003
                                                                BGT:
                                                                           15
                                                                JSR
                                                                           PC. HLTTST
                              003424
1936
       995439
                  994767
                                                                           8$
                                                                                                  : AND . EXIT
1037
       005434
                  000464
1038
                                                               FIND.A.NON+ZERO.ENTRY.IN.THE.'CURRENT.JUMP TABLE':
(A NON-ZERO.ENTRY.IS.THE.ADDRESS OF.A.TEST CONTROL.
ROUTINE). IF NO.NON-ZERO.ENTRIES ARE.FOUND BEFORE.
THE.END.OF.THE.TABLE.IS.REACHED. THEN.ONE.MEMORY.TEST.
CYCLE.OR.'PASS' IS.COMPLETE:
1039
1949
1041
1042
1043
                                                                                                  :POINT TO JUMP TABLE
:FIRST SUB FROM # RTNS LEET
:ALL DONE, TEST LOOP FLAG
:ADVANCE POINTER
:IS THERE AN ADDRESS IN THE TABLE
:NO, BUMP TO NEXT
1044
                                                     1$:
                                                                MOV.
                                                                           MTPHT,R1
       005436
                  016701
                              172526
1045
       005442
                   005367
                                                                DEC
                                                                           MTCHT
1046
                                                                BEQ
 i 947
       005446
                   001406
                                                                           3$
                                                                TST
                                                                            (R1) +
       005450
1948
                   005724
                                                                           (R1)
       005452
                  005711
1049
       005454
                                                                BEQ
                                                                           2$
 1050
                   001772
                                                                                                  SAVE JUMP TABLE ROINTER
                                                                           R1.MTPNT
 1051
       005456
                   010167
                              172586
                                                                MOV.
                                                                           JMPMT
1052 - 005462
                  000454
 1053
 1054
                                                                PASS - FINISHED
 1055
 1056
 1057
                                                                IF THE LOOP FLAG IS NOT ON, EXIT TMT. IF THE LOOP FLAG IS ON AND THE LOOP COUNT IS
 1058
 1059
                                                                EXHAUSTED, EXIT TMT.
 1868
 1061
                                                                                                  :IS-LOOP FLAG-ON-
:NO. GET OUT-
:IS-LOOP COUNT-BEING-USED-
                                                                RIT
                                                                            #LOOP, BASE
        005464
                   032767
                              000001 - 172332 -
                                                                BEQ
                                                                            7$
 1863
       005472
                   001443
                                                                            LOOPET
        005474
                   005767
 1064
                                                                                                  :NO, JUST-KEEP-LOOPING
:SUB-FROM-LOOP-COUNT-
        005500
                   001403
                                                                BEO.
                                                                            4$
                                                                            LOOPET
 1066
1067
        005502
                   005367
                               172456
                                                                DEC
                                                                BEQ
                                                                            7$
                                                                                                   :FINISHED
                   001435
        005506
 1068
                                                                 IF ALL TESTS, PRINT 'END OF PASS NNNN'.
 1069
                                                                REINITIALIZE FOR NEXT PASS:
 1020
 1071
                                                                            #ALLTST,BASE
                                                                                                   :ALL TESTS
                              000010
                                          172306
                                                     4$:
       005510
                                                                            6$
 1073 005516
                   001415
                                                                BEQ
                                                                            #ENDOF, R2
                                                                                                   ; POINT - TO - MESSAGE
                              0033061
                                                                MOV
 1074 005520
                   A12792
                                                                                                   ; LENGTH OF MESSAGE
 1075 005524
                   012703.
                                                                 MOV:
                                                                            #ENDLH,R3
                                          Approved For Release 2005/07/12 : CIA-RDP85-00514R00020002000143
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                                       Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
   1076
1077
         005530
                   012705
                            0014651
                                                          MOV.
                                                                    #PRINT, R5
                                                                                       ;POINT.TO.PRINT.LINE.
;MOVE.MESSAGE.TO.PRINT LINE
         005534
                   112225
                                                5$:
                                                          MOVB
                                                                    (R2)+,(R5)+
         005536
                   305303
                                                          DEC
                                                                   R3
   1079 005540
                   001375
                                                          BHE
                                                                   5$
        005542
                  004767
004767
   1080
                            002742
                                                          JSR
                                                                   PC.PASSC
                                                                                       ;ADD: #: PASSES TO: PRINT LINE
   1081
        005546
                            003130
                                                          JSR
                                                                   PC.CONSOL
                                                                                       :PRINT MESSAGE
   1082
   1083
        005552
                   062767
                            000001
                                      172402
                                                          ADD.
                                                                    #1,PASS
                                                                                       #COUNT-NUMBER-OF-PASSES
#CARRY-TO-HIGH-WORD
#SET-POINTER-TO-CURRENT JUMP TABLE
   1084 005560
                   005567
                             172374
                                                                   PASSH-
                                                          ADC
         005564
                   012767
   1085
                                      172376
                            0007261
                                                          MOV.
                                                                    #MTSUB-2, MTPNT
   1086
         005572
                   012767
                            000111
                                      172372
                                                          MOV-
                                                                    #<TESTS*MEM>+1,MTCNT:;SET.COUNT
   1987
         005600
                   000677
                                                                                       ; AND · ENTER · LOOP
   1088
   1089
   1090
1091
                                                          EXIT:
   1092
                                                                   PC.ENDTST
    1093 005602
                   004767
                                                7$:
                            003246
                                                          JISR
   1094
         005606
                                                          EXIT$S
                                                                                                                              75
                                                8$:
                                                                                                                              005606
                   012746
                                                          MOV.
                                                                    (PC) + . - (SP)
                                                                                                                  .
         005610
                      063
                                001
                                                           .BYTE
         005612
                   104377
                                                          EMT.
                                                                    1095
   1096
1097
                                                          PREPARE TO JUMP TO MEMORY TEST CONTROL ROUTINES
    1098
   1099
   1100
                                                          THE QUOTIENT FROM THE DIVISION BELOW (IN RØ) IS THE TEST NUMBER IN ZERO-RELATIVE FORM. THE REMAINDER IS THE MEMORY
   1101
    1102
                                                          PLACE-HOLDER VALUE:
   1103
    1104
                                                                   FSA-A-
   1105
                                                                   FSA · B
    1106
                                                          2
                                                                   FSA-C
                                                                   INPUT BUFFER OUTPUT BUFFER
   1107
   1108
   1109
                                                                   BYTE TRANSLATOR
    1110
   1111
   1112-005614
                                                JMPMT:
         005614
                                                                   1113
                   012700
                            000110
                                                          MOV-
         005620
                   166700
                             172346
                                                                   MTCHT, R0
#MEM, R1
                                                          SUB
   1115 005624
1116 005630
                   012701
                                                          YOM
                   004767
                            000000G
                                                          JSR
                                                                   PC.$DIV
   1117
         005634
                   010100
                                                                                       SAVE TABLE POSITION IN TORM OFFSET FORM
                                                          MOV
                                                                   R1.R0
   1118
                                                          IF TEST 6 IS ABOUT TO BE EXECUTED SET UP THE MEMORY THORMENT VALUE IN A FIELD THAT THE TEST 6 CONTROL ROUTINE CAN USE.
   1119
   1120
   1121
         005636
                   022700
                            000005
                                                          CMP
                                                                                       :QUOTIENT: =: Z-REL: TEST: NUMBER
:NOT: TEST: 6 THIS: TIME: ::
:BYTE: TRANSLATOR: :
                                                                   #5,R0
   1123
         005642
                   001050
                                                          BNE
                                                                   5$
   1124
        885644
                   822781
                            000005
                                                                    #5.R1
   1125
        005650
                   001004
                                                          BNF
                                                                    1$
   1126
        005652
                   012767
                            000001
                                      172150
                                                          MOV
                                                                   #1.T6FACT
                                                                                       :SET-UP-MEMORY THOREMENT
   1127 005660
                                                                                                                             A 20 5
                  000435
022701
                                                          BR
                                                                   4$
   1128 005662
                            000004
                                                1$:
                                                          CMP
                                                                   #4.R1
                                                                                       ;OUTPUT BUFFER
   1129 005666
                  001004
                                       Approved For Release 2005/07/12
                                                                              CIA-RDP85-00514R000200020001-3
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The same of the same
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            005670
 1130
                                 012767
                                                     000002
                                                                         172132
                                                                                                                 MO√
BR
                                                                                                                                     #2,T6FACT
 1131
                                                                                                                                                                            ;SET.UP.MEMORY.INCREMENT
            005676
                                 000426
                                                                                                                                     4$
                                 022701
                                                     000003
                                                                                                                 CMP
                                                                                                                                     #3.R1
                                                                                                                                                                            ; IMPUT BUFFER.
 1133
            005704
                                 001007
                                                                                                                 BNF
 1134
            005706
                                 012767
012767
                                                     000002
                                                                         172114
                                                                                                                                    #2,T6FACT
#T$DISK,TD$CTW
                                                                                                                 MOV
                                                                                                                                                                            :SET.UP.MEMORY.INCREMENT
  1135
             005714
                                                     000200
                                                                         176360
                                                                                                                 MOV
                                                                                                                                                                           :SIMULATE DISK:
JUMP TO ROUTINE
 1136
            005722
                                 800445
                                                                                                                 BR
                                                                                                                                    LASTJ
 1137
            885724
                                 012767
                                                     000001
                                                                         172076
                                                                                                                MOST
                                                                                                                                     #1.T6FACT
                                                                                                                                                                           :SET-UP-MEMORY-INCREMENT
:START-CLOCK
             005732
                                 012767
                                                     020000
                                                                         176360
                                                                                                                MOV
                                                                                                                                    #T$SCLK,TD$CTW
 1139
            005740
                                 010102
                                                                                                                MOV
                                                                                                                                    R1.R2.
                                                                                                                                                                            COPY REMAINDER
  1149
            005742
005744
                                 006302
                                                                                                                AS'L
MOV
                                                                                                                                    R2: ;SHIFT:FOR:WORD:OFFSET:
SETTBL(R2);TD$CTW:;SELECT:WHICH:FSA:
LASTJ: ;JUMP:TO RTN:
  1141
                                 016267
                                                     0001741
                                                                       176360
  1142
            005752
                                 000431
                                                                                                                BR
                                                                                                                                   LASTJ.
 1143
            005754
                                 012767
                                                     000040
                                                                         176369
                                                                                                                MOV
                                                                                                                                                                           ;SET DIAGNOSTIC BIT
                                                                                                                                    #T$ICD,TD$CTW
 1144
            005762
                                 000425
                                                                                                                                   LAST.I
 1145
                                                                                                                                                                            ; JUMP . TO ROUTINE .
 1146
             005764
                                 022701
                                                    000003
                                                                                             5$:
                                                                                                                OMP
                                                                                                                                    #3,R1
                                                                                                                                                                           : INPUT BUFFER
 1147
            005770
                                 001004
                                                                                                                BNE
                                                                                                                                   6$
            005772
 1148
                                                    000200
                                                                        176360
                                                                                                                MOV
                                                                                                                                    #T$DISK,⊤D$CTW
                                                                                                                                                                          :SIMULATE DISK
 1149
            ййбййй
                                 000416
                                                                                                                BR
                                                                                                                                    LASTJ.
 1150
            006002
                                022701
                                                    000002
                                                                                                                CMP
                                                                                                                                    #2,R1
                                                                                                                                                                           ;2.IS.MAX.OFFSET.FOR.FSA*S
 1151
            006006
                                002410
                                                                                                                BLT
                                                                                                                                    7$
                                                                                                                                                                           :NOT-AN-FSA-
 1152-006010
                                 012767
                                                                                                                                   *T$SCLK,TD$CTW :START CLOCK.
R1 :CONVERT TO WORD OFFSET.
SETTBL (R1).TD$CTW :SELECT WHICH FSA.
                                                    020000
                                                                        176360
                                                                                                                MOV
 1153
           006016
                                006301
                                                                                                                ASL.
           006020
                                016167
                                                    000174*
                                                                       176360
                                                                                                                MOV
1155 006026
                                000404
                                                                                                                BR
                                                                                                                                   LASTJ1
1156
            006030
                                012767
                                                   000040
                                                                                                               MOV #T$ICD, TD$CTW ;SELECT DIAGNOSTIC BIT ; SELECT DIA
                                                                        176360
                                                                                           7$:
1157
1158
1159
1160
1161
 1162
                                                                                                               LOAD RO WITH THE REMAINDER X2 (WORD OFFSET) FOR USE
1163
                                                                                                               BY THE MEMORY TEST CONTROL ROUTINE.
1164
           006036
1165
                                006301
                                                                                           LASTJ: ASL
LASTJI: MOV
                                                                                                                                                                          :SHIFT-FOR-WORD-OFFSET
            006040
                                010100
                                                                                                                                  Ri.RØ :LOAD.RØ
Ri :SHIFT.FOR.DBL.WORD.OFFSET.
CURLIM(Ri).-(SP) :MOVE.MEMORY.END.ADDR.TO.STACK.
CURLIM+2(Ri).-(SP) :MOVE MEMORY START ADDRESS
1167
           006042
                                006301
                                                                                                               ASL
1168
           006044
                                016146
                                                                                                               MOV
           006050
                                                   001152
                               016146
                                                                                                               MOV
1170
1171 006054
                               016701
                                                                                                               MOV
                                                                                                                                  MTPNT,R1
                                                                                                                                                                          ;LOAD-POINTER-TO-CONTROL-RTH ADDR
;JUMP-TO TEST-CONTROL-ROUTINE-
1172-006060
                               000171
                                                                                                               JMF
```

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TMT------MACRO-Mill0 27-MAR-80 15:38 PAGE-19
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    1174
1175
1176
1177
                                                                   MEMORY-TEST-CONTROL-ROUTINES-
    1178
1179
                                                                   TESTS ARE DESCRIBED FULLY IN THE SUB-MODULE TTEST
    1180
    1181
                                                                   TEST-01
    1182
    1183
    1184 006064
    i 185
           006064
                      004770
                                 001214
                                                                              PC.@TiaDDR(R0)
    1186
           006070
                      000167
                                 000434
                                                                   JMP -
                                                                              MTJUMP
                                                                                                    :AND RETURN TO LOOP
    1187
                                                       e's
    1188
    1189
                                                                   TEST-02-
    1190
    1191
1192
          · 006074
006074
                                                        Ť2:
                      005067
                                                                                                    SET TEST PATTERN JO ZERO:
                                 173174
                                                                   CLR
                                                                              CKDATA
                      004770
    1194 006100
                                 0012001
                                                                   JSR
JMP
                                                                              PC.@STADDR(R0)
                                                                                                             ----
    1195
          006104
                      000167
                                                                             MTJUMP
    1196
    1197
    1198
                                                                   TEST-03
    1199
    1200
                                                       ŤЗ:
    1201
           006110
    1202-006110
1203-006116
                      012767
004770
                                                                  MOV:
                                                                             #-1,CKDATA
PC,@STADDR(R0)
MTJUMP
                                 0012001
    1204
           006122
                      600167
                                 000402
    1205
1206
1207
                                                                  TEST-04
    1208
    1209
    1210 006126
1211 006126
1212 006134
1213 006140
                      012767
004770
                                                                             #125252,CKDATA
PC,@STADDR(R0)
                                 125252
                                           173140
                                                                  MOV.
                                 001200'
                                                                   JSR
                      000167
                                 000364
                                                                  JMP
                                                                             MTJUMP.
    1214
    1215
1216
1217
                                                                  TEST-05
   1247
1248
1219 006144
1220 006144
1220 106152
                      012767
004770
                                 146314
                                            173122
                                                                  MOV.
                                                                              #146314.CKDATA
                                 001200
                                                                  JSR.
                                                                             PC.@STADDR(R0)
#031463.CKDATA
    1221 006132
1222-006156
1223 006164
1224 006170
1225
1226
                      012767
004770
                                 031463
                                            173110
                                                                  MOV
                                 0012001
                                                                  JSR
JMP
                                                                             PC.@STADDR(R0)
                                 000334
                                                                             MTJUMP.
   1227
1228
1229
                                                                  TEST-06
```

; T6:

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1230

31 32 - 33 34 35 36					GLR- JSR- JSR- ADD- CLR- JSR- JSR-	CKDATA PC.@STADDR(RØ) PC.@T6ADDR(RØ) T6FACT.(SP) CKDATA PC.@STADDR(RØ) PC.@STADDR(RØ)	:SET-PATTERN-TO-ZERO- :PERFORM AT-NEXT-ADDRESS- :RESET-PATTERN-TO-ZERO
38 . 39 006174 40	000167	000330 ⁻		;	SUB JMP	T6FACT,(SP)	RESTORE ORIGINAL LOWER LIMIT RETURN TO TOP OF MT COMMAND LOOF
41 42 · 43 44				;	TEST-07	?	
45 006200 46 006200 47 006204 48 49	004770 000167	001230° 000320		Ť7:	JSR. JMP.	PC,@T7ADDR(R0) MTJUMP∙	:RETURN TO TOP OF MT COMMAND LOOF
50 51 52				;	TEST-08	3	
53 006210 54 006210 01 55 006216 00 56 006222 01 57 006230 00 58 006234 00	012767 004770	004770 001200° 012767 177400 004770 001200°	T8: 173056 173044	т́8:	MOV. JSR.	#377.CKDATA PC.@STADDR(R0)	;SET-TEST-PATTERN-=-X100FF1
	012767 004770 000167			MOV. JSR. JMP.	#177400,CKDATA PC,@STADDR(R0) MTJUMP	:SET-TEST-PATTERN-=-X1FF001 :RETURN-TO-TOP-OF-MT-COMMAND LOOF	
60 61 62 63				;	TEST-09	9	
64 006240 65 006246 66 006246 67 006252 68 006256 69 006260	006302. 010267	000001 001200° 173016 173010	·173026	T9: 1\$:	MOV JSR MOV ASL MOV	#1,CKDATA PC,@STADDR(R0) CKDATA,R2 R2 R2,CKDATA	:START TEST PATTERN AT 1 :LOAD FOR SHIFT :SHIFT A BIT :NEXT TEST PATTERN
70 006264 71 006266 72 006270 73	005702 001367 000167	000234			TST: BNE: JMP:	R2· 1\$ MTJUMP·	FINISHED:?:
74 75 76					TEST-10)	— ———————————————————————————————————
77 78 006274 79 30				; T10: ;	Μολ·	MT10.CKDATA	;USER·PATTERN·
281 006274 282 283	000167	000230	•	:	JSR. JMP.	PC,@STADDR(RØ) MTJUMP:	:RETURN TO TOP OF MT. COMMOND 100F
34 35 36				;	TEST-11		grande i de la companya de la compa Grande i de la companya de la compa

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                                      Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
   1288
                  012767
         006300
                            100001 / 172766
0012004
                                                        MOV
                                                                  #100001.CKDATA
   1289
         006306
                  004770
                                                         JSR
                                                                  PC.@STADDR(R0)
   1290
        006312
                  012767
                            040002
                                     172754
                                                        MOV
                                                                  #040002.CKDATA
   1291
         006320
                  004770
                            001200
                                                        JISR
                                                                  PC.@STADDR(R0)
        006324
                  012767
                            020004
                                                        MOV
                                                                  #020004,CKDATA
   1293
         006332
                  004770
                            001200
                                                        JSR
                                                                  PC.@STADDR(R0)
   1294
         006336
                  012767
                            001010
                                     172730
                                                        MOV
                                                                  #001010,CKDATA
   1295
         006344
                  004770
                            001200
                                                        JSR
                                                                  PC.@STADDR(R0)
   1296
         006350
                  012767
                            004020
                                     172716
                                                        MOV
                                                                  #004020,CKDATA
   1297
         006356
                  004770
                            001200
                                                        JSR
                                                                 PC.@STADDR(RØ)
#002040.CKDATA
PC.@STADDR(RØ)
   1298 006362
1299 006370
                  012767
                            002040
                                     172704
                                                        MOV
                  004770
                            0012001
                                                        JSR.
   1300
         006374
                  012767
                            001100
                                                        MOV
                                                                  #001100,CKDATA
   1301 006402
                  004770
                            001200
                                                        JSR.
                                                                 PC,@STADDR(R0)
#000600,CKDATA
   1302-006406
                  012767
                            000600
                                    :172660
                                                        MOV-
   1303 006414
                  004770
                            601200'
                                                        JSR
                                                                 PC.@STADDR(R0)
   1304
        006420
                  000167
                           000104
                                                        JMP
                                                                 MTJUMP .
   1305
   1306
1307
                                                        TEST- 12-
   1308
   1309
   1310
        006424
                                               T12:
   1311
        006424
006430
                            172644
                  005067
                                                        CLR.
JSR.
                                                                 CKDATA:
                                                                                    : SET TEST PATTERN.
   1312
                  004770
                           0012001
                                                                 PC.@STADDR(R0)
   1313
        006434
                  005067
                            172636
                                                        CLR
                                                                 CK2.
   1314
1315
        006440
                  012767
                            177777
                                                                 #-1,CK3
PC,@TCDADD(R0)
                                     172632
                                                        MOV
        006446
                  004770
012767
                           001244
                                                        JSR
   1316
        006452
                           177777
172614
                                     172616
                                                        MOV
                                                                 #+1.CK2.
                                                                                    :READ PATTERN
   1317
        006460
                  005067
                                                        CLR
                                                                 CK3
                                                                                    : WRITE PATTERN
   1318
        006464
                  004770
                           001244
                                                        JSR
                                                                 PC.@TCDADD(R0)
   1319
   1320
        006470
                  005067
                            172602
                                                        CLR
                                                                 CK2.
                                                                                    READ PATTERN
   1321
        005474
                  012767
                            177777
                                     172576
                                                        MOV
                                                                 #-1.CK3
                                                                                    :WRITE PATTERN
   1322
        006502
                  004770
                           0012601
                                                        JSR
                                                                 PC.@TCUADD(R0)
   1323
        006506
                  012767
                            177777
                                     172562
                                                        MOV
                                                                                    :READ :
                                                                 #-1.CK2
        006514
   1324
                  005067
004770
                           172560
                                                                                                 ---
                                                        CLR
                                                                 СКЗ
                                                                                    : WRITE.
        006520
                           001260
                                                                 PC.@TCUADD(R0)
                                                        JSR
   1326
1327
        006524
                  000167
                           000000
                                                        JMP
                                                                 MTJUMP
   1328
   1329
        006530
                  062706
                           000004
                                              MTJUMP:
                                                       ADD
                                                                 #4,SP
                                                                                    ;RESTORE SP
   1330 006534
                  000167
                           176640
                                                        JMP
                                                                 MTMAIN
                                                                                    :AND RETURN
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The state of the s

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 1332
  1333
  1334
                                                                                                                           1335
  1336
  1337
              006540
  1338 006540
                                                                                                                           SAVE
                                                                                                                                                 R0.R1.R2,R3.R4.R5
                                    010046
              006540
                                                                                                                           MOV-
                                                                                                                                                 R0,-(SP)
              йй6542
                                    010146
                                                                                                                                                R1,-(SP)
R2,-(SP)
                                                                                                                           MOV-
               006544
                                    010246
               006546
                                    010346
                                                                                                                           MOV.
                                                                                                                                                 R3,-(SP)
                                    010446
              006550
                                                                                                                           MOV.
                                                                                                                                                 R4,-(SP)
               006552 010546
                                                                                                                                                 R5.-(SP)
 1339
1340
                                                                                                                          SET-FLAG-FOR ERROR-ENCOUNTERED: AN-ERROR-MESSAGE-LIMIT-COUNT-OF-ZERO-MEANS-THAT-THE-COUNT-IS-NOT-BEING-USED. A-COUNT-OF--1 MEANS-THAT-THE-LIMIT-HAS-BEEN-REACHED.
  1341
 1342
1343
                                                                                                                           (NO-MORE-ERROR-MESSAGES-ARE-TO-BE-PRINTED).
  1344
  1345
              006554
                                    052767
                                                         000040
                                                                             171242
                                                                                                                                                 #ERROR, BASE
                                                                                                                           BIS.
                                                                                                                                                                                           ;SET.FLAG.FOR.ERROR.ENCOUNTERED
  1346
              006562
                                    005767
                                                          171226
                                                                                                                           TST
                                                                                                                                                ERL IM-
  1347
              006566
                                    001412
                                                                                                                          BEO.
                                                                                                                                                2$
1$
 1348
             006570
                                    003002
                                                                                                                          BGT.
  1349
             006572 000167
                                                         000372
                                                                                                                                                ERRORX.
 1350
 1351
                                                                                                                          DECREMENT ERROR LIMIT COUNT: IF IT GOES ZERO HERE TSET NO MORE ERROR MESSAGES. IT TO -1 .
 1352
 1353
 1354
 1355
             006576
                                   005367
                                                                                                                          DEC -
                                                                                                     1$:
                                                                                                                                                ERL IM-
 1356
             006602.
                                   001004
                                                                                                                                                2$
              006604
                                   йй5367
                                                         171204
                                                                                                                                                ERL IM
                                                                                                                           DEC
 1358
             006610
                                   000167
                                                         000354
                                                                                                                           JMP
                                                                                                                                                ERRORX:
 1359
 1369
 1361
                                                                                                                          DERIVE TEST NUMBER FROM THE ADDRESS POSITION OF THE CURRENT MEMORY TEST CONTROL ROUTINE IN THE CURRENT JUMP TABLE.
 1362
 1363
                                                                                                                         GET-THE-OFFSET-FROM-THE-BEGINNING-OF-THE-TABLE. DIVIDE-BY THE-NUMBER-OF-MEMORIES-IN-THE TABLE. THE-QUOTIENT IS THE-TEST-NUMBER-(ZERO-RELATIVE). THE-REMAINDER-IS THE MEMORY-PLACE-HOLDER-VALUE. SAVE-IT.
 1364
 1365
 1366
 1367
 1368
1369
             006614
                                   012700
                                                         000110
171346
                                                                                                                                                ##<TESTS*M'EM>,RØ :LOAD.NUMBER.OF.TESTS.(TOTAL)
MTCNT.RØ :SUB.CURRENT.COUNT OF.TABLE.ENTRIES.
#MEM.RI :SYSTEM:SUBRTN.EXPECTS.DIVISOR.IN.R1
DIVIDEND IN THE PROPERTY OF TH
1370
1371
             006620
                                   166700
                                                                                                                          SUB
                                                                                                                                               MTCHT, RØ
             006624
                                   012701
004767
                                                         000006
                                                                                                                                               #MEM.R1
PC.$DIV
                                                                                                                                                                                         SYSTEM SUBRTH EXPECTS DIVISOR IN A DIVIDEND IS IN R1
TEMP SAVE REMAINDER
PREPARE FOR CONVERSION TO DECIMAL ADJUST ZERO RELATIVE NUMBER
CONVERT INTO WORK FIELD SUPPLY LEADING ZEROS
CONVERT BINARY TOPECIMAL
            006630
                                                         000000G
                                                                                                                           JSR
1373 006634
                                   010146
                                                                                                                          MOV
                                                                                                                                               R1,-(SP)
1374 006636
1375 006640
                                   010001
                                                                                                                          MOV
                                                                                                                                               R0.R1
                                   005201
                                                                                                                           INC
                                                                                                                                               Ri
1376 006642
                                   012700
                                                        0013161
                                                                                                                                                #ASWRK,R0
                                                                                                                          MOV
1377
            005646
                                   912702
                                                        000001
                                                                                                                          MOV
                                                                                                                                                #1.R2.
1378
            006652
                                  004767
                                                        000000G
                                                                                                                          JSR
                                                                                                                                               PC.$CBDSG.
1380 006656
                                  012705
                                                        0014651
                                                                                                                                                                                          :POINT-AT-PRINT-LINE-
:POINT-AT-1TEST-1
:NUMBER-OF-BYTES-IN-STRING-
                                                                                                                         MOV.
                                                                                                                                               #PRINT, R5
1381 006662
                                  012700
                                                        0013231
                                                                                                                         MOV
                                                                                                                                               #TMSG,R0
1382 - 006666
                                 J12701
                                                       000005
                                                                                                                         MOV
                                                                                                                                               #5.R1
                                                                                  Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
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       1383 006672
                                  112025
                                                                                     3$:
                                                                                                      MOVE
                                                                                                                        (R0)+,(R5)+
                                                                                                                                                         :MOVE · LABEL · TO · PRINT · LINE
       1384
                006674
                                  205301
                                                                                                      DEC:
                                                                                                                       R1
       1385
                006676
                                  J01375
                                                                                                      BNF
                                                                                                                       3$
       1386
                 006700
                                  116725
                                                   172415
                                                                                                      MOVB
                                                                                                                       ASWRK+3,(R5)+
                                                                                                                                                         :MOVE-A-DIGIT OF-TEST NUMBER
       1388 006704
                                  116725
                                                   172412
                                                                                                      MOVB
                                                                                                                       ASWRK+4,(R5)+
       1389
                006710
                                 062705
                                                   000002
                                                                                                      ADD:
                                                                                                                       #2,R5
                                                                                                                                                         :BUMP - PRINT - LINE - POINTER
       1390
       1391
                                                                                                      MOVE PASS COUNT TO PRINT LINE.
       1392
       1393
                006714
                                  012700
                                                   001330
                                                                                                                                                         :POINT:AT: 'PASS: '
:NUMBER:OF:BYTES:IN:STRING
:MOVE:LABEL:TO:PRINT:LINE:
                                                                                                      MOV.
                                                                                                                        #PMSG,R0
       1394
                 006720
                                  012701
                                                                                                      MOV
                                                                                                                        #5,R1
       1395
                 006724
                                  112925
                                                                                      45:
                                                                                                       MOVB
                                                                                                                        (R0) + (R5) +
                 006726
       i396
                                  005301
                                                                                                      DEC -
                                                                                                                       P1
       1397
                 006730
                                  001375
                                                                                                                        4$
       1398
                006732
                                  004767
                                                   001552
                                                                                                                       PC.PASSC
                                                                                                                                                         CONVERT NUMBER OF PASSES
       1399
                006736
                                  062705
                                                   000003
                                                                                                      ADD
                                                                                                                                                          :BUMP POINTER
       1400
       i 40 i
                                                                                                      REPORT: 'FAILING: MEMORY'
       1482
       1403 006742
                                  012700
                                                   001335
                                                                                                      MOV.
                                                                                                                        #FMSG,R0
                                                                                                                                                         :POINT-AT-STRING-
       1404 006746
                                  012701
                                                   000020
                                                                                                      MOV-
                                                                                                                       #16..R1
                                                                                                                                                         ; LENGTH · OF · STRING ·
       1405 006752
                                   112025
                                                                                                      MOVB
                                                                                                                        (R0) + (R5) +
                                                                                                                                                         ; MOVE · LABEL · TO · PRINT · LINE
                006754
006756
       1406
1407
                                                                                                      DEC.
                                  005301
                                  001375
       1408
                                                                                                      USE THE REMAINDER FROM THE ABOVE DIVISION AS AN INDEX
       1409
       1410
                                                                                                       INTO A TABLE OF MEMORY NAMES (= 6 BYTES EACH).
       1411
       1412
                 006760
                                  012601
                                                                                                      MOV-
                                                                                                                        (SP)+_*R1
                                                                                                                                                         ;LOAD-REMAINDER-FROM-DIVISION-ABOVE-
       1413 006762
                                  012700
                                                    000006
                                                                                                       MOV.
                                                                                                                        #6.R0
                                                                                                                                                         :SYSTEM - SUBRTH - EXPECTS - MULTIPLIER - IN - RO
       1414
                006766
                                  994767
                                                   000000G
                                                                                                       JSR.
                                                                                                                       PC,$MUL
       1415
                 006772
                                  012700
                                                    001417
                                                                                                                       #FTBL,R0
R1,R0
                                                                                                                                                         :POINT:TO:TABLE:OF MEMORY:NAMES:
:POINT:TO:THE:ONE:THAT:FAHLED:
:NUMBER:OF:CHARS:IN:NAME:
                                                                                                      MOV.
       1416
                 006776
                                   060100
                                                                                                      ADD
       1417
                007000
                                  012701
                                                    000006
                                                                                                       MOV
                                                                                                                        #6.R1
       1418 007004
                                                                                                                                                          :MOVE · NAME · TO · PRINT · LINE
                                   112025
                                                                                      6$:
                                                                                                      MOVE
                                                                                                                        (R0) + .(R5) +
       1419 007006
                                  005301
                                                                                                      DEC -
                                                                                                                       R1
        1420
                 007010
                                   001375
                                                                                                       BHE
                                                                                                                       6$
       1421 007012
                                  004767
                                                   001664.
                                                                                                                       PC,CONSOL
                                                                                                                                                         ; WRITE ONE LINE TO CONSOLE
       1422
        1423
                                                                                                      LINE 2
       1424
                                                                                                      ADDRESS OF ERROR, EXPECTED PATTERN, RECEIVED PATTERN
       1425
                 007016
                                  012705
                                                   9914651
                                                                                                                                                         POINT TO PRINT LINE POINT TO CADDRESS CONTROL CADDRESS CONTROL CADDRESS CONTROL CONTRO
       1426
                                                                                                       MOV.
                                                                                                                        #PRINT, R5
        1427
                 007022
                                  012700
                                                    0013551
                                                                                                      MOV
                                                                                                                        #AMSG,R0
        1428
                 007026
                                   012701
                                                    000011
                                                                                                                        #9..R1
                                                                                                                                                                                                           ----
                                                                                                       MOV
       1429 007032
1430 007034
                                   112025
                                                                                      7$:
                                                                                                       MOVB
                                                                                                                        (R0)+,(R5)+
                                                                                                                                                          :MOVE · LABEL
                                  005301
                                                                                                       DEC
                                                                                                                       R1
       1431
                007036
                                  001375
                                                                                                      RNF
                                                                                                                        7$
       1432
       1433 007040
1434 007044
1435 007050
                                                                                                                        ERRADD,R1
                                   016701
                                                    172240
                                                                                                       MOV.
                                                                                                                                                          :LOAD · ERROR · ADDRESS ·
                                  004767
                                                   001404
                                                                                                       JSR.
                                                                                                                        PC.UNPK
                                                                                                                                                          CONVERT TO PBINTABLE CHARS
                                  005205
                                                                                                       INC
                                                                                                                                                          ;BUMP · PRINT · LINÉ · POINTER
       1436
                                                                                                                                                         POINT TO EXPECTED
       1437 007052
                                  012700
                                                    001366*
                                                                                                      MOV-
                                                                                                                        #EMSG,R0
       1438 007056
                                  012701
                                                   000012
                                                                                                      MOV
                                                                                                                        #10.,R1
                                                                                                                                                          ;LOAD NUMBER OF CHARS
                                                                                                                                    (R5) + MOVE LABEL .
2 CIA-RDP85-00514R000200020001-3
       1439 007062
                                  112025
                                                                                     8$:
                                                                                                       MOVB
                                                                       Approved For Release 2005/07/12
```

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O·M1110 27+MAR-80 15:38 PAGE 20-2
TMT----- M
                                             Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
    1440 007064
                     305301
                                                                  DEC ....
                                                                             R1
    1441 007066
                     001375
                                                                  BNE -
                                                                             8$
    1442
    1443 007070
                     016701
                                1722887 :
                                                                                                   :LOAD MEMMORY TEST PATTERN
                                                                  MOV:
                                                                             CKDATA,R1
    1444 007074
                     004767
                                001354.
                                                                  ISR
                                                                             PC.UNPK
                                                                                                   :CONVERT
    1445 007100
                     005205
                                                                  IHC
                                                                                                   :BUMP - PRINT - LINE - POINTER - -
    1446
    1447
          007102
                     012700
                                0014001
                                                                  MOV.
                                                                             #RMSG,RØ
                                                                                                   :POINT-TO- *RECEIVED- *
    1448 007106
1449 007112
1450 007114
                     912701
                                000012
                                                                  MOV.
                                                                             #10..R1
(R0)+.(R5)+
                                                                                                   :LOAD · NUMBER · OF · CHARS
                     112025
                                                                  MOVB
                                                                                                   ; MOVE · LABEL ·
                     005301
    1451
          007116
                     001375
    1452
                                                                  COUNT-OF-NUMBER-OF-WORDS-TO-PRINT-=-0 SIGNALS-THAT.
THE-RESULTS-OF-SEVERAL MEMORY-READS-WERE-UNPREDICTABLE:
    1453
                                                       ;
    1454
    1455
                                                                  PRINT * * *
    1456
   1457 007120
1458 007124
1459 007126
1460 007132
                     016700
                                 172162
                                                                  MOV.
                                                                             ERRCT, RØ
                                                                                                   ;LOAD · NUMBER · OF · WORDS · TO · CONVERT
                     003010
                                                                  BGT.
                                                                             11$
                                                                                                   : PRINT - WORDS -
                     012700
                                0014121
                                                                  MÖV
                                                                             #UNMSG, RØ
                                                                                                   :* * *
                     012701
                                000005:
                                                                                                   :LENGTH OF MESSAGE
                                                                  MOV.
   1460 007132
1461 007136
1462-007140
1463 007142
1464 007144
                      112025
                                                       10$:
                                                                  MOVB
                                                                             (R0)+,(R5)+
                     005301
001375
                                                                  DEC.
                                                                  BNE.
                                                                             10$
                     000407
                                                                             13$
    1465
    1466 007146
                     012702.
                                0013101
                                                       11$:
                                                                  MOV.
                                                                             #ERW1.R2
   1466 007146 012702
1467 007152 012201
1468 007154 064767
1469 007160 005300
1470 007162 001373
                                                                                                   ;POINT TO FIRST OF THEM
                                                       12$:
                                                                  MOV.
                                                                             (R2) + R1
                                                                                                   :LOAD · THE · WORD · ITSELF ·
                                 001274
                                                                  JSR.
                                                                             PC.JUNPK
RØ
                                                                  DEC -
                                                                                                                                     7
                                                                  BHE
                                                                             12$
                                                                                                                                              a<sub>A</sub>
    1472-007164 004767
1473
1474 007170
                                001512
                                                       13$:
                                                                  JSR -
                                                                             PC.CONSOL.
                                                                                                   :ELSE-WRITE-TO-CONSOLE
                                                       ERRORX:
    1475 007170
007170
                                                                  RESTOR
                                                                             R0.R1,R2,R3,R4,R5
                     012605
                                                                             (SP)+,R5
(SP)+,R4
                                                                  MOV.
          007172
007174
                     012604
012603
                                                                  MOV.
                                                                  MOV-
                                                                             (SP)+_{r}R3
          007176
                                                                             (SP)+,R2
(SP)+,R1
                                                                  MOV
          007200
007202
                     012601
                                                                  MOV.
                     012600
                                                                  MOV
                                                                             (SP) + R0
    1476 007204
                                                                  RTS
```

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                                              Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
    1478
    1479
    1480
                                                                  AST-
    1481
    1482
                                                                   INTERCEPT CHARACTER FROM CONSOLE.
                                                                  ON 'W' PRINT TEST NUMBER, PASS COUNT, MEMORY NAME, ADDRESS, AND TEST PATTERN.
    1484
                                                                  HND-TEST-PHITERN;
ON 'C' PRINT TEST-PATTERN-('CKDATA').
ON 'P' PRINT NUMBER OF PASSES.
ON 'T' PRINT TEST-NUMBER.
ON ALL-OTHERS-EXIT-TMT.
    1485
    1486
    1487
    1488
1489
    1490
    1491
          007206
                                                       AST:
    1492.007206
1493 007212
007212
                                                                             (SP)+.ASTWRD: ;:
R0.R1.R2.R3.R4.R5
                                                                  MOV-
                                                                                                    :GET-CHAR
                                                                   SAVE
                      010046
                                                                  MOV.
                                                                             R0.-(SP)
R1.-(SP)
           007214
                      010146
           007216
007220
                      010246
                                                                              R2,-(SP)
                                                                   MOV
                      010346
                                                                  MOV.
           007222
                      010446
                                                                   MOM
                                                                             R4,-(SP)
           007224
                      010546
                                                                              R5,-(SP)
    1494
    1495 007226
1496 007234
1497 007236
                      122767
                                 000120. 170550
                                                                   CMPB
                                                                              # P. ASTWRD
                                                                                                    :PRINT-NUMBER-OF-PASSES-AND-CONTINUE.
                      001002
                                                                   BNE -
                                                                              1$
                                                                   JMP
                      000167
                                                                             PAST
    1498
          007242
007250
                      122767
                                 000103. 170534
                                                                   CMPB
                                                                              #'C'ASTWRD
                                                                                                    :PRINT-OUT-TEST-PATTERN-,...
    1499
                      001002
000167
                                                                   BNE -
                                                                              2$
          007252
    1500
                                 000202.
                                                                   JMP
                                                                              CAST
    1501 007256
1502 007264
                      122767
                                 000124: 170520
                                                                   CMPB
                                                                              #1T,ASTWRD
                                                                                                    :PRINT-OUT-TEST-NUMBER
                      001002
                                                                  BNE -
                                                                              3$
    1503
                                 000210.
          007266
                      000167
122767
                                                                              TAST
    1504 007272
                                 000127 170504
                                                                   CMPB -
                                                                              #'W.ASTWRD
                                                                                                    : PRINT - WHERE -
    1505 007300
                      001402
                                                                             MAST
                                                                  RED.
    1506
          007302
                      000167
                                 000256.
                                                                             EAST
    1507
    1508
    1509
                                                                  ROUTINE FOR W
    1510
                                                                  DERIVE: TEST: NUMBER: FROM: THE: POSITION: OF: THE: CURRENT:
    1511
    1512
                                                                  MEMORY TEST CONTROL ROUTINE IN THE CURRENT JUMP TABLE.
    1513
    1514
                                                                  GET-THE-OFFSET-FROM-THE-BEGINNING-OF-THE-TABLE, DIVIDE-
BY THE-NUMBER-OF-MEMORIES-IN-THE TABLE, THE-QUOTIENT
IS THE-TEST-NUMBER-(ZERO-RELATIVE), THE-REMAINDER-IS THE-
    1515
    1516
                                                                  MEMORY PLACE-HOLDER VALUE. SAVE IT.
    1518
    1519
          007306
007306
    1520
                                                       WAST:
    1521
                      012700
                                                                             **(TESTS**MEM> R0 ;LOAD NUMBER OF TESTS (TOTAL)
MTCNT R0 ;SUB CURRENT ROUTINE NUMBER
                                 000110
                                                                  MOV
    1522-007312
                      166700
                                 170654
                                                                  SHB
                                                                             MTCHT,RØ
#MEM,R1
    1523 007316
                      012701
                                 000006
                                                                                                   SYSTEM SUBRTH EXPECTS DIVISOR IN R1
DIVIDEND IS IN R1
TEMP SOVE DEMONSTRATE DECIMAL ADJUST ZERO RELATIVE NUMBER
                                                                  MOV
   1524 007322
                     004767
                                 000000G
                                                                   JSR
                                                                             PC.SDIV
                     010146
                                                                  MOV
                                                                             R1.-(SP)
R0.R1
   1526 007330
1527 007332
                     010001
                                                                  MOV
                     005201
                                                                   INC
                                                                             R1
   1528
          007334
                     012700
                                001316
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```
SUPPLY LEADING ZEROS CONVERT BINARY TO DECIMAL.
1529 887348
                                 012702
                                                        000001
                                                                                                                         MOV.
                                                                                                                                               #1.R2
1530 007344 004767
                                                        000000G
                                                                                                                         JSR-
                                                                                                                                              PC,$CBDSG.
 1531
                                                                                                                                                                                                  an an analysis of the state of 
1532
                                                                                                                         TEST NUMBER
1533
1534 007350
1535 007354
                                                                                                                                                                                         :R5 -> PRINT LINE : NUMBER *
                                                                                                                                                                                                                                           1.34
                                  012705
                                                        001465°
                                                                                                                         MOV.
                                                                                                                                               #PRINT, R5
                                  116725
                                                                                                                         MOVB
                                                                                                                                               ASWRK+3,(R5)+
1536
1537
                                    116725
                                                         171736
                                                                                                                         MOVB
                                                                                                                                               ASWRK+4, (R5)+
             007364
                                  005205
1538
 1539
                                                                                                                         PASS
1549
1541 007366 004767
                                                        001116
                                                                                                                                              PC.PASSC.
                                                                                                                                                                                         :PRINT-OUT-PASS-NUMBER-
 1542 007372 005205
                                                                                                                         INC-
                                                                                                                                                                                         ; BUMP · PRINT · LINE · POINTER ·
1543
1544
                                                                                                                        MEMORY.
 1545
1546
1547
                                                                                                                        USE: THE REMAINDER FROM THE ABOVE DIVISION AS AN INDEXINTO A TABLE OF MEMORY NAMES.
 1548
            007374
007376
1549
                                  012601
                                                                                                                                                                                         :LOAD-REMAINDER-FROM-DIVISION-ABOVE:
:SYSTEM-SUBRTN-EXPECTS-MULTIPLIER-IN-RØ
                                                                                                                                              (SP)+.R1
#6.R0
PC.$MUL
                                                                                                    3$:
                                                                                                                         MOV:
 1558
                                  012700
                                                                                                                        MOV-
 155 i
             007402
                                  004767
                                                        000000G
                                                                                                                         JSR.
 1552
             007406
                                  012700
                                                                                                                                                                                        ;POINT TO TABLE OF MEMORY NAMES :
;POINT TO THE ONE THAT FAHLED :
;NUMBER OF CHARS IN NAME :
;MOVE NAME TO PRINT LINE :
                                                        0014171
                                                                                                                         MOV-
                                                                                                                                               #FTBL,R0
1553 007412
1554 007414
1555 007420
                                   060100
                                                                                                                         ADD .
                                                                                                                                              R1.R0
                                  012701
                                                        000006
                                                                                                                         MOV
                                                                                                                                              #6,R1
                                   112025
                                                                                                   4$:
                                                                                                                         MOVB
                                                                                                                                               (R0)+,(R5)+
            007422
007424
 1556
                                  005301
                                                                                                                        DEC -
BNE -
                                                                                                                                              R4
 1557
                                  991375
                                                                                                                                              4$
            007426
                                  005205
                                                                                                                         THO
                                                                                                                                              R5
 1559
1560
                                                                                                                        ADDRESS:
1561
1562-007430
1563 007434
                                 016701
                                                        171646
                                                                                                                        MOV.
                                                                                                                                              PREADD, R1
                                                                                                                                                                                         :LOAD ERROR ADDRESS : :CONVERT TO PBINTABLE CHARS :BUMP PRINT LINE POINTER
                                  004767
                                                        001014
                                                                                                                         JSR.
                                                                                                                                              PC.UNPK
 1564 007440
                                005205
                                                                                                                         INC.
1565
i566
                                                                                                                         TEST - PATTERN
 1567
                                                                                                                                                                                         :LOAD MEMMORY TEST PATTERN
1568 007442
1569 007446
1570 007452
                                  016701
                                                         171626
                                                                                                                        MOV-
                                                                                                                                              CKDATA,R1
                                 004767
004767
                                                        001002
                                                                                                                         JSR-
                                                                                                                                              PC.UNPK.
PC.CONSGL
                                                                                                                                                                                         :CONVERT
                                                        001224.
                                                                                                                                                                                         ;ELSE WRITE TO CONSOLE ;EXIT AST
 1571
            007456
                                 000475
1572
1573
1574
                                                                                                                        PRINT TEST PATTERN ALONE
 1575
1576
1577
1577 007460
1578 007460
                                 012705
016701
                                                       001465; 171604; ·
                                                                                                                        MOV-
                                                                                                                                              #PRINT, R5
            007464
                                                                                                                        MOV.
JSR
                                                                                                                                              CKDATA, R1
                                                                                                                                                                                         :LOAD · TEST · PATTERN
1580 007470
1581 007474
                                  004767
                                                        000760.
                                                                                                                                             PC, UNPK
PC, CONSOL.
                                                                                                                                                                                         CONVERT TO ASCII.
                                 004767
                                                        001202
                                                                                                                        JSR
                                                                                                                                                                                        :WRITE TO TTO
1582 007500
                                 000464
                                                                                                                        BR
1583
1584
1585
```

The Property

PRINT-OUT-TEST-NUMBER-ALONE
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                                                                                            Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
        1586
        1587
                                                                                                                                     DERIVE TEST NUMBER FROM THE POSITION OF THE CURRENT MEMORY TEST CONTROL ROUTINE IN THE CURRENT JUMP TABLE.
         1588
         1589
         1590
         1591
                                                                                                                                     GET.THE.OFFSET.FROM.THE.BEGINNING.OF.THE.TABLE. DIVIDEBY THE.NUMBER.OF.MEMORIES.IN.THE TABLE.THE.QUOTIENT IS THE.TEST.NUMBER.(ZERO-RELATIVE).
         1592
         1593
         1594
         1595
         1596 007502
                                                                                                                TAST:
                      007502
                                            012700
                                                                                                                                                            **TESTS*MEM%.R0 :LOAD NUMBER OF TESTS (TOTAL)
MTCHT.R0 :SUB-CURRENT ROUTINE NUMBER
                                                                  000110
                                                                                                                                      MOV
                      007506
         1598
                                             166700
                                                                   170460
                                                                                                                                      SUB.
                                                                                                                                                            MTCHT, RØ
                                                                                                                                                                                                        SOB CURRENT ROUTINE NUMBER
SYSTEM SUBRTN EXPECTS DIVISOR IN R1
DIVIDEND IS IN R1
PREPARE FOR CONVERSION TO DECIMAL
ADJUST ZERO RELATIVE NUMBER
CONVERT INTO WORK—FIELD
SUPPLY LEADING ZEROS
CONVERT BINARY TO DECIMAL
                                            012701
004767
         1599
                     007512
                                                                   000006
                                                                                                                                      MOV-
                                                                                                                                                            #MEM.R1
         1600
                     007516
                                                                   000000G
                                                                                                                                      JSR
                                                                                                                                                            PC.$DIV
                                            010001
                                                                                                                                      MOV
                                                                                                                                                            R0.R1
        1602 007524
1603 007526
                                             00520
                                                                                                                                      INC
                                                                                                                                                            R1
                                                                                                                                                            #ASWRK,RØ
                                            012700
012702
                                                                  0013164
                                                                                                                                      MOV
         1604 007532
                                                                                                                                                                                                                                                                                              THE THE LOCAL PROPERTY.
                                                                  000001
                                                                                                                                      MOV-
                                                                                                                                                            #1,R2
         1605
                     007536
                                                                  000000G
                                            004767
                                                                                                                                      JSR-
                                                                                                                                                           PC, $CBDSG
        1686
                     007542
         1607
                                            012705
                                                                  0014651
                                                                                                                                      MOV
                                                                                                                                                                                                        ;R5 -> PRINT LINE:
;MOVE:1 DIGIT OF:TEST NUMBER
                                                                                                                                                            #PRINT,R5
        1608 007546
1609 007552
1610 007556
                                                                  171547
171544,
                                            116725
                                                                                                                                                           ASWRK+3,(R5)+
ASWRK+4,(R5)+
                                                                                                                                     MCVB
MOVB
                                            116725
                                            004767
                                                                  001120
                                                                                                                                      JSR.
                                                                                                                                                            PC, CONSOL.
         i6ii
                     007562 000433
                                                                                                                                     BR
         1612
        1613
1614
         1615
                                                                                                                                     EXIT-PROGRAM
         1616
        1617
                                                                                                                                     IF THE 'ALL TESTS, ALL MEMORIES, FULL RANGE' OPTION IS IN EFFECT, THE PASS NUMBER FOR THE PREVIOUS PASS HAS ALREADY BEEN PRINTED OUT (SEE 'MTMAIN').
        1618
        1619
        1620
         1621
        1622-007564
                                                                                                               EAST:
        1623 007564
                                           004767
032767
                                                                  001270
                                                                                                                                      JSR
                                                                                                                                                           PC. HLTTST
                                                                                                                                                                                                        :WRITE HALT MESSAGE
        1624 007570
                                                                                                                                                            #ALLTST, BASE
                                                                  000010, 170226
                                                                                                                                                                                                        :ALL TESTS ?
        1625
                                            001025
                                                                                                                                                           REST
                                                                                                                                     BNE
        1626
        1627
        1628
                                                                                                                                     PRINT-NUMBER OF-PASSES ALONE-
         1629
                                                                                                               :
        1630
                                                                                                                                                                                                       POINT TO PRINT LINE TO PRINT L
                     007600
        1631
                                                                                                               PAST:
                     007600
        1632
                                           012700
                                                                  0014651
                                                                                                                                     MOV
                                                                                                                                                           #PRINT, RØ
                     007604
                                           012701
        1633
                                                                  000116
                                                                                                                                     MOV.
                                                                                                                                                            #78.,R1
        1634 007610
1635 007614
                                            112720
                                                                  000040
                                                                                                               15:
                                                                                                                                    MOVB
DEC-
                                                                                                                                                           #40,(R0)+
                                           005301
                                                                                                                                                           R1
        1636 007616
                                           001374
                                                                                                                                     BNF
        1638 007620
                                           012705
                                                                                                                                     MOV
                                                                                                                                                           #PRINT,R5
#PMSG2,R0
                                                                                                                                                                                                        :POINT . TO . PRINT . LINE .
       1639 007624
1640 007630
                                                                 003272
                                                                                                                                                                                                       POINT TO NUMBER OF PASSES.
                                           012700
                                                                                                                                     MOV
                                           012701
                                                                 000014.
                                                                                                                                    MOV:
MOVB
                                                                                                                                                           #PM2LN,R1
       1641 007634
1642-007636
                                                                                                              2$:
                                                                                                                                                           (R0)+,(R5)+
                                           005301
                                                                                                                                     DEC
                                                                                            Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
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TMT------ M 0-M1110 27-MAR-80 15:38 PAGE-21-3 Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3 1643 007640 001375 BNE···· 2\$ 1644 1645 007642 004767 000642 PC.PASSC. JSR. :CONVERT DOUBLE-WORD 1646 007646 004767 001030 JSR PC.CONSOL 1647 1648 007652 REST: RESTOR -R0,R1,R2,R3,R4,R5 007652 012605 MOV. (SP)+,R5 (SP)+,R4 012604 MOV 007656 012603 MOV-(SP) + R3007660 012602 MOV-(SP) + R2007662 012601 MOV (SP) + .R1007664 MOV (SP) + R01649 1650 007666 122767 000120 170110 CMPB #*P.ASTURD :PRINT. # PASSES - AND - CONTINUE 1651 007674 001414 10\$ #'C,ASTURD BED 1652 007676 122767 000103: 170100 CMPB ;PRINT-TEST-PATTERN-AND-CONTINUE-1653 007704 1654 007706 001410 BEQ 10\$ 122767 000124 170070 CMPB # T. ASTWRD :PRINT-TEST-NUMBER AND-CONTINUE-007714 001404 BEQ. 10\$ 1656 007716 1657 007724 122767 000127 170060 CMPB #'W,ASTWRD :PRINT-WHERE-AND-CONTINUE 007724 001003 BNE. 1\$:NO. EXIT. 1659 007726 10\$: ASTX\$S 007726 007730 012746 MOV (PC) + , -(SP)001 163 .BYTE 115..1 007732 104377 EMT **↑**0<377> 1660 1661 007734 1662-007740 ; POINT - TO - PRINT - LINE -012701 001465' 1\$: MOV-#PRINT,R1 012700 112711 000116 MOV. #78..R0 #40.(R1) : NUMBER - OF - BYTES -1663 007744 000040 2\$: MOVB DEC: :CLEAR · LINE · TO · BLANKS 1664 007750 005300 RØ 1665 007752 001374 BNE 2\$ 1666 007754 000015 000012 112767 112767 171593 MOVB #15,PRINT :WRITE-OUT-1 CR+LF 007762 1667 171476 MOVB #12,PRINT+1 1668 007770 004767 000706 JSR. PC.CONSOL -1669 007774 1670 EXIT\$S 007774 007776 012746 (PC) + . - (SP)MOV-063 001 .BYTE 51..1 104377 010000 EMT <u></u>40<377>

```
1672
1673
                                                                                       SUBRTH FOR MEMORY LIMITS
1675
1676
                                                                                       INPUT:
                                                                                       2(SP)
1677
                                                                                                      ABSOLUTE LOWER LIMITS.
1678
                                                                                       4(SP)
                                                                                                      ABSOLUTE UPPER LIMITS
1679
                                                                                       6(SP)
                                                                                                      ADDRESS OF PROMPT ROUTINE
1680
1681
                                                                                       OUTPUT:
                                                                                       (SP)
2(SP)
                                                                                                      CURRENT - WORKING - LOWER - LIMITS - CURRENT - WORKING - UPPER - LIMITS -
1683
1684
                                                                                       WORK · FIELDS · USED:
1686
                                                                                       LOWER
                                                                                       UPPER
1687
1688
                                                                                       PROMPT FOR LIMITS. A KCR > RESPONSE MEANS TO TAKE
1689
                                                                                       THE ABSOLUTE LOWER AND UPPER LIMITS AND RETURN THEM ON THE STACK, OTHERWISE IF THE RESPONSE IS IN SET
1698
1691
                                                                                       THE - FORM:
1692
1693
1694
                                                                                       >000000 000012
1695
                                                                                      THIS ROUTINE CONVERTS THE FIRST VALUE AND COMPARES IT AGAINST THE MEMORY'S ABSOLUTE LOWER LIMITS AT 2(SP). IF THE NEW LIMITS ARE IN RANGE, THEY ARE PLACED IN A TEMPORARY WORK FIELD, THE ROUTINE THEN CHECKS THE COMMAND LINE FOR THE UPPER LIMITS, CONVERTS THEM, AND COMPARES THEM AGAINST THE MEMORY'S ABSOLUTE UPPER LIMITS, IF THE NEWLY ARE DOOR IN A TEMPORARY HELD IMITS, APE IN A TEMPORARY
1696
1697
1699
1700
1701
                                                                                       THEM AGAINST THE MEMORY'S ABSOLUTE UPPER LIMITS, IF THE NEW LIMITS ARE IN RANGE, THEY ARE PLACE IN A TEMPORARY WORK AREA, THE ROUTINE THEM COMPARES THE NEW UPPER LIMITS WITH THE NEW LOWER LIMITS, IF THE NEW UPPER LIMITS ARE EQUAL TO OR GREATER THAN THE NEW LOWER LIMITS, BOTH NEW VALUES ARE PLACED ON THE STACK; THE ROUTINE THAT CALLED LIMITS WILL TAKE THESE VALUES OFF THE STACK AND PLACE THEM IN THE CURRENT LIMITS TABLE?, DURING THE MEMORY TEST CYCLE, THE LIMITS FROM THIS TABLE ARE MADE AVAILABLE TO THE MEMORY TEST ROUTINES.
1702
1703
1794
1705
1706
1707
1708
1709
1710
                                                                                        TO THE MEMORY TEST ROUTINES.
1711
1712·
1713 010002
                                                                        LIMITS:
         010002
                         004776
                                         000006
                                                                                        JSR
                                                                                                       PC,06(SP)
                                                                                                                                      :PROMPT-FOR-LIMITS
                                                                                                                                      FIRST FIND A NUMBER :NO OVERRIDES LEAVE LIMITS ALONE :CONVERT LOWER LIMIT TO BINARY
1715 010006
                         004767
                                         000262
                                                                                        JSR.
                                                                                                       PC.FIND.
LIMX2.
                                                                                       BOS
1716 010012
                         103472
         010014
                                                                                        Ĵŝĸ
                                                                                                       PC.PACK
                         004767
                                         000372
                         103003
1718 010020
                                                                                       BCC
                                                                                                       1 $
                                                                                                                                      : VALUE - OK . CONTINUE -
                                                                                                       PC.ERR4
                                                                                        JSR
1719 010022
                                         001112
1720 010026
                         000765
                                                                                                       LIMITS.
                                                                                                                                      :TRY-AGAIN-
1721
i722
                                                                                       GHECK - LOWER - LIMITS
1723
1724 010030
                                                                                        CMP
                                                                                                       BINWD,2(SP)
                                                                                                                                      :COMPARE LOWER-LIMITS.
                         026766
                                                        000002
                                         167762
                                                                        1$:
1725 010036
                          103003
                                                                                                                                      OK, CONTINUE
                                                                                       BHIS
                                                                                                       2$
                                                                                                                                                                                                THE V.
1726 010040
1727 010044
                                                                                                       PC.ERR4
                         004767
                                        001074
                                                                                        JSR.
                         000756
                                                                                       BR
                                                                                                       LIMITS.
                                                                                                                                      :TRY-AGAIN
1728
```

```
R0 M1110 27-MAR-80 15:38 PAGE 22-1
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1729
                                                    ALSO CHECK NEW LOWER LIMITS AGAINST ABSOLUTE UPPER LIMITS ON THE STACK. AN ERROR HERE WOULD SHOW UP BELOW BUT IT IS MORE CORRECT TO REPORT AN ERROR IN LOWER LIMITS IF
1730
1731
1732
                                                    IF THE NEW LOWER LIMITS ARE HIGHER THAN THE ABSOLUTE
1733
                                                    UPPER LIMITS.
1734
                                                                                                            1735 010046
               826766
                        167744
                                 000004
                                                    CMP
                                                                                : IS-NEW-LOW-LIMIT-GT-ABS-UPPER-LIMIT.
                                                             BINWD,4(SP)
1736 010054
                                                             20$
PC.ERR4
               101403
                                                    BLOS
                                                                                :NO, NEW LOWER-LIMIT-IS-OK-
     010056
1737
               004767
                        001056
                                                    JSR -
1738 010062
1739
               000747
                                                             LIMITS
1740
1741
1742
                                                    SAVE NEW LOWER LIMITS: FIND NEW UPPER LIMITS IN COMMAND
                                                    LINE:
1743 010064
               016767
                                                                               :MOVE-IN NEW-LOW-LIMITS-
:FIND-UPPER-LIMITS IN-COMMAND-LINE
                        167726
                                 167730
                                           20$:
                                                    MOV-
                                                             BINWD, LOWER.
1744
     010072
               004767
                        000176
                                                    JSR
                                                             PC, FIND
1745
     010076
               103003
                                                    BCC:
                                                             3$
PC,ERR5
                                                                                ;OK, CONTINUE
1746
     010100
               004767
                        001030
                                                    JSR.
1747
     010104
               000736
                                                             LIMITS:
                                                                                :START-OVER
1748
1749 010106
               004767
                        000300
                                           3$:
                                                             PC.PACK
                                                    JSR.
                                                                                :CONVERT UPPER-LIMITS
1750 010112
               103003
                                                    BCC.
                                                             4$
                                                                                OK, CONTINUE
175 i
     010114
               004767
                        991914
                                                    JSR
                                                             PC, ERR5
1752
1753
     010120
              000730
                                                    BR
                                                             LIMITS.
                                                                                :START-OVER
1754
                                                    CHECK NEW UPPER LIMITS.
1755
1756 010122
               026766
                        167670
                                 000004
                                           4$:
                                                    CMH
                                                             BINUD,4(SP)
                                                                                ;COMPARE UPPER LIMITS
1757 010130
1758 010132
              101403
                                                    BLOS
                                                              5$
                                                                                OK, CONTINUE
                        000226
                                                             PC, ERRS
                                                    JSR-
1759 010136
              000721
                                                    BR
                                                             LIMITS.
                                                                                :START-OVER-
1760
1761
1762
                                                    COMPARE NEW LOWER LIMITS WITH NEW UPPER LIMITS.
1763 010140
               016767
                        167652
                                 167652
                                          5$:
                                                    MOV.
                                                             BINWD, UPPER
                                                                                :PLACE NEW UPPER LIMIT ON STACK
1764 010146
               026767
                        167650
                                 167644
                                                    CMP.
                                                             LOWER, UPPER
                                                                                ; IS UPPER LIMIT GT LOWER LIMIT
1765 010154
1766 010156
               101403
                                                    BLOS
                                                             LIMX
                                                                                :YES, EXIT-
               004767
                        000752
                                                    JSR-
                                                             PC,ERR5
1767 010162
               000707
                                                    BR
                                                             LIMITS:
                                                                                :TRY-AGAIN
1768
1769 010164
              016766
                                                             LOWER,2(SP)
                        167632
                                 000002 LIMX:
                                                    MOV-
                                                                                :PUT NEW LOWER-LIMITS-ON-STACK-
1770 010172
                        167622
              016766
                                 999994
                                                                                PUT NEW UPPER LIMITS ON STACK
                                                    MOV.
                                                             UPPER,4(SP)
1771 010200
              000207
                                           LIMX2:
                                                             PC.
                                                    RTS.
```

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TMT------ MACRO - M1 110 27-MAR-80 15:38 PAGE 23 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
    1773
    1774
    1775
                                                                  SCAN-A-TABLE FOR-A-VALID-COMMAND/MNEMONIC-
    1777
1778
                                                                   INPUT:
                                                                  RØ = NUMBER.OF.ENTRIES IN.COMMAND.TABLE
R1 -> CHAR.STRING.IN.GCML.COMMAND.LINE.
R2 -> TOP.OF COMMAND.TABLE.
    1780
1781
    1782
    1783
                                                                  R1 -> ROUTINE THAT GOVERNS THE COMMAND (IF MATCH WAS MADE) R1 -> CHAR STRING IN COMMAND LINE (IF NO MATCH WAS MADE). R0 = RELATIVE POSITION OF MATCHED ENTRY IN TABLE
    1784
    1785
1786
    1787
    1788 010202
                                                       SCAN:
    1789 010202.
                      010346
                                                                  MOV.
                                                                              R3.-(SP)
                                                                                                    :SAVE R3
                                                                                                  SAVE # ENTRIES
    1790 010204
                      010046
                                                                  MOV
                                                                              RA.-(SP)
    1791 010206
                      010146
                                                                  MOV
                                                                              R1,-(SP)
                                                                                                                                             STRING
    1792
                      011601
    1793 010210
                                                       FNOUT1:
                                                                                                    :POINT TO NON-BLANK IN COMMAND L'INE
:NUMBER OF CHARS IN NON-BLANK FIELD
                                                                  MOV
                                                                              (SP).R1
    1794 010212
1795 010216
                     012703
                                 000002
                                                                  MOV
                                                                              #2,R3
                      122122
                                                       FHIH1:
                                                                  CMPB
                                                                              (R1)+,(R2)+
                                                                                                    DOES COMMAND LINE MATCH TABLE ENTRY
NO. TRY NEXT TABLE ENTRY
SUB FROM LOOP COUNT
    1796 010220
                      001003
                                                                  BNE
                                                                              FNOUT2
    1797 010222
                      885383
                                                                  DEC
                                                                             R3
    1798 010224
                      001374
                                                                  BNE
                                                                             FHIH1
    1799 010226
                      000411
                                                                                                    COMMAND FOUND IN TABLE : ADD ** UNCOMPARED CHARS TO POINTER : THEN ADJUST TO NEXT TABLE ENTRY
                                                                              FHMTCH-
    1800 010230
                      060302
                                                       FNOUT2: ADD
                                                                             R3.R2
    1801 010232
                      005202
                                                                  INC
                                                                             R2.
    1802 010234
                      005300
                                                                  DEC
                                                                                                    :SUB FROM OUTER LOOP COUNT
:TRY AGAIN
    1803 010236
                      001364
                                                                  BNE
                                                                             FN0UT1
    1804 010240
                      012601
                                                                  MOV
                                                                              (SP)+,R1
(SP)+,R0
                                                                                                    ; RESTORE COMMAND LINE POINTER
    1805 010242
                      912600
                                                                  MOV
                                                                                                    RESTORE RORE R3
    1806 010244
                     012603
                                                                              (SP)+,R3
                                                                  MOV.
    1807 010246
                     00026
                                                                  SEC
                                                                                                    COMMAND NOT IN TABLE
    1808 010250
                     000207
                                                                  RTS
                                                                             PC.
    1809
    1810 010252
                      010201
                                                       FHMTCH: MOV
                                                                                                   ;POINT.R1 AT MEMORY FLAG IN TABLE
:POINT TO INCOMING R0 ON STACK
:GET TOTAL + TABLE ENTRIES
                                                                             R2.R1
    1811 010254
                     062706
                                 000002
                                                                             #2,SP.
(SP)+,R2.
                                                                  ADD
    1812-010260
                     A12692
                                                                  MOV
    1813 010262
                      169992
                                                                             RØ.R2
                                                                                                    GET POSITION OF MATCHED ENTRY
    1814 010264
                     010200
                                                                  MOV.
                                                                             R2.R0
   1815 010266
1816 010270
                     012603
                                                                  MOV.
                                                                              (SP) + R3
                                                                                                    :RESTORE R3
                     000241
                                                                  CLC.
    1817 010272.
                     000207
                                                                             PC.
```

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TMT------ M20 M1118 27-MAR-88 15:38 PAGE 24 Approved For Release 2005/07/11 CIA-RDP85-00514R000200020001-3
    1819
    1820
    1821
                                                               \label{eq:find-the-next-non-blank-in-the-command-buffer.} FIND-THE-LENGTH-OF-THE-STRING-THAT-STARTS-WITH-THAT-CHARACTER.
    1822
    1823
                                                                                                                              1824
    1825
                                                                             NUMBER OF UNPROCESSED BYTES IN COMMAND LINE
    1826
                                                               GCMPNT: - ADDR: OF: NEXT UNPROCESSED: POSITION: IN: COMMAND: LINE
    1828
                                                               OUTPUT:
    1829
                                                               R1 -> STRING, R0 = LENGTH OF STRING
                                                               GCMLEN, GCMPNT-UPDATED FOR NEXT-ENTRY INTO THIS ROUTINE
    1831
    1832
                                                               THIS ROUTINE IS DESIGNED TO BE ENTERED A NUMBER OF TIMES
    1833
                                                               IN THE PARSING OF A COMMAND LINE, THE FIELDS GCMLEN AND GCMPNT ARE REFRESHED WHEN A NEW COMMAND LINE IS READ
    1834
    1835
                                                               (SEE THE MESSAGE PRINTING PROMPTING CODE).
    1836
    1837
    1838
          010274
                                                    FIND:
                    010246
    1839 010274
                                                               MOV.
                                                                          R2,-(SP)
GCMLEN,R1
                                                                                               ;SAVE · R2
    1849 919276
                    016701
                               167652
                                                               MOV.
                                                                                               : # BYTES REMAINING IN COMMAND BUFFER
    1841 010302
                    001440
                                                                          FSECX-
                                                                                               :THERE ARE NONE
    1842 - 010304
                    016702
                               167646
                                                                                               ; I HERE: HRE: NUNE:
;LOAD: CURRENT: POINTER:
;LOOK: FOR: A: BLANK:
;OK: BUMP: TO: NEXT: CHAR:
;COMMA: IN: COMMAND: LINE:
;TREAT: COMMA: AS: BLANK:
;PUMP: BOINTED:
                                                               MOM:
                                                                          GCMPNT, R2
    1843 010310
                     122712
                               000040
                                                               CMPB
                                                                          #40,(R2)
    1844 010314
                    001403
                                                               BEQ -
                                                                          104
    1845 010316
                     122712
                               000054
                                                               CMPB
                                                                          #*** (R2)
    1846 010322
                                                               BNE
                                                                          2$
                    005202
005301
    1847
         010324
                                                                                               ;BUMP - POINTER -
;SUB - FROM - REMAINING - LENGTH -
                                                                          R2.
    1848 010326
                                                                          R1
    1849 010330
                    001367
                                                               BNE
    1850 010332-
                                                               BR
                                                                          FSECX-
                                                                                               ; NO · NON-BLANK · FOUND ·
    1851
    1852-010334
                                                                                               :TEMP SAFE POINTER TO BEGINNING OF STRING :CLEAR CHAR COUNT :LOOK FOR A BLANK :FOUND END OF STRING :
                    B1B246
                                                    2$:
                                                               MOV-
                                                                          R2,-(SP)
    1853 010336
                    005000
                                                                          RØ
    1854 010340
                     122712
                               000040
                                                    3$:
                                                               CMPB
                                                                          #40,(R2)
   1855 010344
                    001407
                                                               BED.
                                                                          4$
    1856 010346
                     122712
                               000054
                                                               CMPB
                                                                          #*..(R2)
                                                                                               *TREAT COMMAS AS BLANKS
         010352
                    001404
                                                               BEQ.
                                                                          4$
    1858 010354
                                                               INC
                                                                                               :BUMP - POINTER -
:BUMP - CHAR - COUNT -
:SUB - FROM - BYTES - REMAINING -
                                                                          R2 -
   1859 010356
                    005200
005301
                                                                          RØ
    1860 010360
                                                               DEC
                                                                          R1
    1861 010362
                    001366
                                                               BNE
                                                                          3$
   1862
   1863 010364
                    010267
                               167566
                                                               MOV
                                                                          R2,GCMPNT.
                                                                                               #SAVE - POINTER - FOR - NEXT - TIME - #SAVE - BYTES - REMAINING - FOR - NEXT - TIME #POINTER TO - BEGINNING - OF - STRING -
   1864 010370
                    010167
                               167560
                                                               MOV.
                                                                          R1.GCMLEN:
    1865 010374
                    012601
                                                               MOV:
                                                                          (SP) + R1
   1866 010376
                    012602
                                                               MOV
                                                                          (SP) + R2
                                                                                               ;RESTORE R2
   1867
         010400
                    000241
                                                               CLC
    1868 010402
                    000207
                                                                                                                      1869
   1870 010404
1871 010406
                    012602
                                                    FSECX:
                                                               MOV.
                                                                          (SP)+,R2.
                                                                                               ;RESTORE R2
                    000261
000207
   1872-010410
                                                               RT5
                                                                         PC:
```

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TMT----- MACRO-M1110 27-MAR-80 15:38 PAGE-25
                                             Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
    1874
    1875
                                                                 CONVERT: AN: ASCII: OCTAL VALUE: FROM: THE: COMMAND: LINE: INTO: BINARY LEGAL: STRINGS: CONTAIN: FROM: 1 TO: 6 CHARACTERS:
    1876
    1877
    1878
    1879
                                                                 RØ = NUMBER:OF:CHARACTERS:IN:ASCII:STRING
R1 -> STRING
    1888
    1881
    1882
    1883
                                                                 OUTPUT:
    1884
                                                                 THE FIELD 'BINWD' CONTAINS THE CONVERTED VALUE
    1886
    1887
          010412
                                                      PACK:
          010412
    1888
                      822788
                                000006
                                                                 CMP
                                                                                                  ;UPPER-LIMIT-ON-OCTAL-DIGITS
    1889
          010416
                      001014
                                                                 BHE
                                                                            PSECX-
                                                                                                  :ERROR EXIT
    1890 010420
                                                                            R1.-(SP)
R0.(SP)
                                                                 MOV
                                                                                                  :SAVE-STRING POINTER-TEMPORARILY
    1891 010422
                     060016
                                                                                                 #ADD-CHAR-COUNT:
#ADD-CHAR-COUNT:
#GET-STRING-ADDR-INTO-RØ FOR SUBRTN-
#CONVERT ASCII-OCTAL
#SUBRTN-PUSHES-RØ 1 TOO-FAR-
                                                                 ADD
    1892 - 010424
                      010100
                                                                 MOV
                                                                            R1.R0
    1893 010426
                      004767
                                000000G
                                                                 JSR
DEC
                                                                            PC,$COTB
    1894 010432
                      005300
                                                                            R9
    1895 010434
                     020026
001004
                                                                 CMP
                                                                            R0.(SP)+
                                                                                                  ;FULL STRING CONVERTED ;NO, ERROR
    1896 010436
                                                                 BHE
    1897 010440
                     010167
                                167352
                                                                 MOV
                                                                            R1.BINWD
                                                                                                  ;SAVE · CONVERTED · VALUE
    1898
    1899 010444
                     000241
                                                      PCLCX:
                                                                 CLC.
          010446
    1900
                     000207
                                                                            PC:
    1901 010450
                     000261
                                                      PSECX:
                                                                 SEC
    1902-010452
                                                                            PC.
    1903
    1904
    1905
    1906
                                                                 CONVERTA VALUE FROM BINARY TO PRINTABLE FORM. R1 = WORD TO BE CONVERTED. R5 -> PRINT LINE.
    1907
    1988
    1909
    1910
    1911 010454
                                                      UNPK:
    1912-010454
                                                                 SAVE
                                                                            R0.R1.R2
           010454
                     010046
                                                                            R0.-(SP)
R1.-(SP)
                                                                 MOV.
           010456
                     010146
                                                                 MOV:
           010460
                     010246
                                                                 MOV
                                                                            R2.-(SP)
    1913
                                                                                                 PREPARE TO CALL PARE SUBRIAN
KEEP LEADING ZEROS
CONVERT TO UT A SASCEI
RESTORE PRINT VINE POINTER;
AND BUMP IT
    1914 010462
                     010500
                                                                 MOV-
                                                                            R5,R0
    1915 010464
                     012702
                                000001
                                                                 MOV.
JSR:
                                                                            #1,R2
    1916 010470
1917 010474
                     004767
                                000000G
                                                                            PC.$CBOMG
                                                                            RØ. R5
                     010005
                                                                 MOV
    1918 010476
                     005205
                                                                 INC
    1919
    1920 010500
                                                                 RESTOR
                                                                            R0.R1.R2
(SP)+.R2
(SP)+.R1
          010500
                     012602
012601
012600
                                                                 MOV.
          010502
                                                                 MOV.
          010504
                                                                            (SP) + R0
   1921 010506
                     000207
                                                                 RTS
                                                                            PC-
                                                                                                                                   Estate.
```

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0.M1110 27-MAR+80 15:38 PAGE 26
                                                                    1924
                                                                                                       CONVERT NUMBER OF PASSES TO ASCII DECIMAL
1925
1926
1927
                                                                                                       INCLUDE DOUBLE WORD CONVERSION (BINARY TO ASCII DECIMAL)
1928
                                                                                                                        R5 -> PRINT-LINE.
FIELD-'PASS' = LOW-ORDER PASS-COUNT-
FIELD-'PASSH' =-HIGH-ORDER-PASS-COUNT-
1929
1939
1931
                                                                                                      OUTPUT: R5 -> NEXT PRINT LINE POSITION AFTER CONVERTED WALUE
1933
1934
          010510
                                                                                    PASSC:
1936 010510
                             005767
                                                                                                       TST
                                                                                                                         PASSH
                                                                                                                                                              : IS-PASS NUMBER-A-DOUBLE-WORD
1937 010514
                             001011
                                                                                                                                                             :YES, CONVERT DOUBLE WORD

:PREPARE TO CALL CONVERSION RTN

:NUMBER TO BE CONVERTED

:SUPPLY LEADING ZEROS
                                                                                                                         DOUBLE -
1938 010516
                             010500
                                                                                                       MOV
                                                                                                                         R5.R0
1939 010520
                             016701
                                                                                                       MOV
                                                                                                                         PASS,R1
1940 010524
                             012702
                                               000001
                                                                                                       MOV
                                                                                                                          #1.R2.
1941 010530
                             004767
                                               ининия.
                                                                                                       JSR
                                                                                                                         PC,$CBDSG
1942-010534
                             010005
                                                                                                       MOM
                                                                                                                         RALES
                                                                                                                                                              :RESTORE PRINT-LINE-POINTER
1943 010536
                             000453
                                                                                                       BR
                                                                                                                         PASSX
                                                                                                                                                              :EXIT-
1944
1945 010540
                             016701
                                                167414
                                                                                    DOUBLE: MOV
                                                                                                                         PASSH,R1
                                                                                                                                                              :LOAD-HIGH-WORD-
1946 010544
                             016702.
                                               167412
                                                                                                                        PASS,R2.
                                                                                                      MOV
                                                                                                                                                               :LOAD·LOW·WORD·
1947 010550
                             010346
                                                                                                       MOV
                                                                                                                                                                            THE PARTY OF THE P
1948 010552
                             010446
                                                                                                                         R4.-(SP)
1949
1950 010554
                                                                                                                                                              :R3 = LOOP:COUNTER
:R4->CONVERSION:STORAGE:AREA
:CLEAR:STORAGE:AREA:TO:0'S
                             012703
                                               000012
                                                                                                       MOV
                                                                                                                         #10..R3
#ASCNST,R4
1951 010560
                             012704
112724
                                                0106701
                                                                                                       MOV.
1952 - 010564
                                               000060
                                                                                    15:
                                                                                                       MOVB
                                                                                                                          #60,(R4)+
1953 010570
                             005303
                                                                                                       DEC
                                                                                                                         R3
1954 010572
                             001374
                                                                                                       BNE
                                                                                                                         1$
1955
                                                                                                                                                             ;R4->LAST-BYTE-OF-STORAGE: :}c
1956 010574
                             012704
                                                0107021
                                                                                                       MOV
                                                                                                                         #ASCNST+12,R4
1957
          010600
                             012703
                                                000012
                                                                                                       MOV.
                                                                                                                         #12,R3
#10.,R0
1958 010604
                             012700
                                                                                                       MOV
1959 010610
010610
                                                                                                       CALL
                                                                                                                         $DDIV
                             004767
                                               ививиясь.
                                                                                                       JSR.
                                                                                                                         PC, $DDIY
1960 010614
                             062700
                                               000060
                                                                                                       ADD
                                                                                                                         #60.R0
                                                                                                                                                             :ASCII NO. (REMAINDER+60 OCTAL)
1961 010620
                              110044
                                                                                                       MOVB
                                                                                                                         R0.-(R4)
1962-010622-
                             005303
                                                                                                       DEC
1963 010624
                             001367
                                                                                                       BNE
                                                                                                                         2$
1965 010626
                             012703
                                               000012
                                                                                                       MCV.
                                                                                                                          #12.R3
1966 010632
1967 010636
                              122724
                                                равава
                                                                                    3$:
                                                                                                       CMPB
                                                                                                                          #60,(R4)+
                                                                                                                                                              REMOVE LENDING ZEROS
                             001003
                                                                                                      BNE
                                                                                                                         4$
                             005303
1968 010640
                                                                                                                         R3
1969 010642
                             001373
                                                                                                       BNE
                                                                                                                          3$
1970 010644
                             005203
                                                                                                                                                              ; IF ALL 0'S, THE LAST ONE IS OK
1971
1972 010646
1973 010650
                                                                                                                         R4
                                                                                     4$:
                                                                                                       DEC -
                             010401
                                                                                                       MOV.
                                                                                                                                                              :R1-> RESULT
1974 010652
                             010302
                                                                                                       MOV
                                                                                                                         R3,R2
                                                                                                                                                               ;R2 - = · LENGTH · OF · RESULT ·
1976 010654
1977 010656
                              112125
                                                                                                       MOVB
                                                                                                                          (R1)+,(R5)+
                                                                                                                                                              :MOVE - CONVERTED - VALUE - TO - PRINT - LINE
                             305302
                                                                                                       DEC
1978 010660
                             001375
                                                                                                       BNF
                                                                    Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
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TMT----- MACRO M1110 27+MAR-80 15:38 PAGE 26-1 Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3

1979 1980 010662-1981 010664 1982-010666 1983 1984 1985 010670 012604 012603 000207 MOV: MOV: RTS: (SP)+,R4 (SP)+,R3 PC: PASSX:

:RETURN

ASCNST: .BLKW

;CONVERSION-STORAGE-AREA

```
TMT----- M2
              RO M1110 27-MAR-80 15:38 PAGE 27
                                          Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
    1987
    1988
    1989
                                                             WRITE - A - PRINT - LINE - TO - TTØ
    1990
    1991
   1992-010702
1993 010702
                                                   CONSOL:
                    812700
                              000120
                                                             MOV
                                                                        #80..R0
                                                                                             :PRINT-BUFFER-BYTE COUNT-
    1994
         010706
                    012701
                              001603
                                                                                            :POINT PAST END OF BUF
:LOOK FOR A NON-BLANK
                                                             MOV
                                                                        #PRINT+78..R1
#40.-(R1)
                                                                                                                     BUFFER
    1995
         010712
                    122741
                              000040
                                                   1$:
                                                              CMPB
    1996
         010716
                    001003
                                                              BHE
                                                                                            :OK, WRITE LINE
:DEC CHAR COUNT
                                                                        2$
   1997 010720
1998 010722
                    005300
                                                              DEC
                                                                        RØ
                    001373
                                                             RNE
                                                                        1$
    1999
         010724
                    000436
                                                              BR
                                                                        ABEND2.
                                                                                            :NO-NON-BLANKS?
   2000
   200 i
          010726
                                                                        #10:WVB,#LUN.TT,#EFN.1.,#STAT,,<#PRINT-2,R0,ABEND2
                                                             QIOW$S
                                                   2$:
          010726
                    005046
                                                             CLR
                                                                        -(SP)
          010730
010732
010734
                    005046
                                                             CLR
                    йй5й46
                                                                        -(SP)
                    005046
                                                             CLR
                                                                        -(SP)
          010736
010740
010744
                    010046
                                                                        R0.-(SP)
#PRINT-2.-(SP)
                                                             MOV
                    012746
                                                             MOV.
                    005046
                                                                        -(SP)
          010746
                    012746
                              000006
                                                             MOV:
                                                                        #STAT,-(SP)
          010752
                    005046
                                                             CLR
                                                                        -(SP)
          010754
                    112716
                              000001
                                                                        #EFN.1.(SP)
#LUN.TT.-(SP)
#IO.WVB.-(SP)
                                                             MOVE
                    012746
012746
          010760
                              000001
                                                             MOV.
          010764
                              000000G
                                                             MOV.
          010770
                    012746
                                                             MOV
                                                                        (PC)+,-(SP) 3,12.
          010772
010774
                        003
                                  014
                                                              BYTE
                    104377
                                                                        ↑0<377>
.+6
                                                             EMT
          010776
                    103002
                                                             BCC
JSR
                    004767
          011000
                                                                        PC, ABEND2
   2002
   2003
    2004
         011004
                    012701
                              0014651
                                                                        #PRINT,R1
                                                             MOV
                                                                                             :POINT · TO · STRING
   2005 011010
                              000040
                                                   4$:
                                                             MOVB
                                                                        #40,(R1)+
                                                                                            :CLEAR · LINE · TO · BLANKS
:DEC · LOOP · COUNT ·
   2006 011014
2007 011016
                    005300
001374
                                                             DEC
                                                                        RØ
                                                             BNE
                                                                        4$
    2008 011020
                    000207
                                                             RTS
                                                                       PC
   2009
         011022
011022
   2010
                                                   ABEND2:
                                                             ABRT$S
                                                                        #MYSELF -
                    012746
                              0000000
                                                                       #MYSELF,-(SP)
@(SP),-(SP)
#2,2(SP)
                                                             MOV:
          011026
                    017646
                              000000
                                                             MOV.
          011032
                    062766
                              000002
                                         000002
                                                             ADD:
          011040
                    017666
                              000002
                                         000002
                                                             MOV:
                                                                        @2(SP),2(SP)
                    012746
          011046
                                                             MOV.
                                                                        (PC) + * + * (SP)
          011050
                                                             .BYTE
EMT
                                  003
                                                                       83..3
*0<377>
                    104377
          011052
```

17:14

: 13 ::

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TMT----- MACRO-M1110 27-MAR-80 15:38 PAGE-28
                                        Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
   2012
   2013
   2014
                                                          WRITE . TO . TTO AND . PROMPT
   2015
   2016
   2017
         011054
    2018 011060
                   005267
005267
                             166726
                                                HLTTST:
                                                           INC
                                                                    ERWORD
                                                STOP:
                                                           INC
    2019 011064
                             166722
                                                                    FRUDRE
   2020 011070
                   005267
                             166716
                                                BEGTST:
                                                                    ERWORD
         011074
                   005267
                                                                    ERWORD
    2021
                              166712
                   005267
    2022-011100
                              166706
                                                 ERR12:
                                                           INC
                                                                    ERWORD
    2023 011104
                   005267
                             166702
                                                ERRII:
                                                           INC
                                                                    ERMORD
    2024 011110
                   005267
                              166676
                                                 ERR10:
                                                           INC
                                                                    ERWORD .
                                                           INC
    2025 011114
                   005267
                                                 ERR9:
                                                                    ERWORD
   2026 011120 2027 011124
                   005267
                             166666
                                                FRRA:
                                                                    FRUORD
                                                           INC
                   005267
                                                                    ERWORD.
                             166662
                                                 ERR7:
    2028 011130
                              166656
                   005267
    2029 011134
                   005267
                             166652
                                                 ERR5:
                                                           INC
                                                                    ERWORD
                                                           INC
INC
   2030 011140
2031 011144
                   005267
                             166646
                                                 ERR4:
                                                                    ERWORD
                   005267
                             166642
                                                 ERR3:
                                                                    ERWORD
    2032-011150
                   005267
                                                 ERR2:
                                                                    ERWORD
    2033
2034 011154
                                                 NESTOP:
    2035 011154
                   005267
                             166632
                                                 EROPT:
                                                           INC
                                                                    ERWORD.
                                                           INC
    2036 011160
                    005267
                              166626
                                                 LPTST:
                                                                    ERWORD
    2037 011164
                    005267
                              166622
                                                 USRTST:
                                                                    ERWORD
    2038 011170 2039 011174
                                                           THO
                    005267
                              166616
                                                 SELTST:
                                                                    FRUORD
                                                 PMPTT:
                                                           INC
                    005267
                              166612
                                                                    ERWORD
    2040 011200
                                                 PMPTO:
                    005267
                              166606
                                                                    ERWORD
    2041 011204
                    005267
                              166602
                                                 PMPTI:
                                                           INC
                                                                    ERWORD
                                                 PMPTC:
    2042-011210
2043 011214
                    005267
                              166576
                                                           INC
                                                                    ERWORD
                                                 PMPTB:
                                                           INC
                    005267
                              166572
                                                                    ERLIORD
    2044 011220
                    005267
                                                 PMPTA:
                                                           INC
                                                                    ERWORD
                              166566
    2045 011224
                    005267
                              166562
                                                 MEMSEL:
    2046 011230
                    005267
                                                 ALLSEL:
                                                          INC
                                                                    ERWORD
    2947
                    000014
                                                 NEST -
                                                                     <.-NESTOP>/4
    2048
                                                           USS: THE: INDEX: ERWORD: TO: COUNT: UP: FROM: THE: BOTTOM: OF: THE MESSAGE: TABLE: FIND: THE: END: OF: THE: MESSAGE FIRST; THEN:
    2049
    2050
    2051
                                                           THE BEGINNING, THEN GET THE LENGTH.
    2052
    2053 011234
                    010246
                                                           MOV
                                                                     R2 = (SP)
                                                                                        :SAVE R2
:LOAD LOOP COUNT
:POINT TO END OF MESSAGE TABLE :
:LOOK FOR END OF MESSAGE
    2054 011236
                    016702
                                                           MOV
                                                                    ERWORD, R2
    2055 011242
                    012701
                             0032711
                                                           MOV.
                                                                     #ASCIZ,R1
    2056 011246
2057 011250
                    105741
                                                 1$:
                                                           TSTB
                                                                     -(R1)
                    001376
                                                           BNE
                                                                     1$
                                                                                        :LOOP COUNT:
:BACK UP ANOTHER MESSAGE
    2058 011252
                    005302
                                                           DEC
                                                                    R2
    2059 011254
                    001374
                                                           BHE
                                                                     1$
                                                                                        :SAVE POINTER TO END OF MESSAGE BACK UP TO BEGINNING OF MESSAGE
    2060 011256
                    010100
                                                           MOV
                                                                     R1,R0
    2061 011260
                                                 2生:
                                                           TSTR
                                                                     -(R1)
                    105741
    2062-011262
                    001376
                                                                     2$
                                                           BHE
    2063 011264
                    005201
                                                           INC
                                                                                        :BUMP TO FIRST CHAR OF MESSAGE . .
                                                                     Ri.R0 (SP)+.R2 (SP)+.R2
    2064 011266
                    160100
                                                           SHB
    2065 011270
                    012602
                                                           MOV
    2066
                                                           QIOW$$ - #IO.WVB.#LUN.TT.#EFN.1..#$TAT..<R1.R0>_ABEND
         011272·
0<u>11</u>272· 005046
    2067
                                        Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
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TMT---
              PO M1110 27-MAR-80 15ApprovedFp3P Release 2005/07/12 CIA-RDP85-00514R000200020001-3
         011274
                   005046
                                                           CLR
                                                                     -(SP)
         011276
                   005046
                                                                     -(SP)
                                                           CLR
         011300
                   005046
                                                           CLR
                                                                     -(SP)
         011302
                   010046
                                                           MOV
                                                                     R0,-(SP)
         011304
                   010146
                                                           MOV
                                                                     R1,-(SP)
         011306
                   005046
                                                           CLR
                                                                     -(SP)
         011310
                   012746
                             0000067
                                                           MOV
                                                                     #STAT, - (SP)
         011314
                   005046
                                                           CLR
                                                                     -(SP)
         011316
                   112716
                             กกกกกา
                                                           MOVB
                                                                     #EFN.1.(SP)
         011322
                   012746
                                                                     #LUN.TT,-(SP)
#IO.WVB,-(SP)
(PC)+,-(SP)
3,12.
                             000001
                                                           MOV
                   012746
012746
         011326
                             000000G
                                                           MOV.
         011332
                                                           MOV
         011334
                       003
                                 014
                                                           .BYTE
         011336
011340
                    104377
                   103002
                                                                      . +6
                   004767
         011342
                             000106
                                                           JSR
                                                                     PC.ABEND
   2868
         011346
   2069
                                                           CLEF$S
                                                                     #EFH.1
         011346
                   012746
012746
                             ศิกิศิกิศ 1
                                                           MOV-
                                                                     #EFN.1,-(SP)
         011352
                                                           MOV:
                                                                     (PC)+,-(SP)
         011354
                       037
                                 002
                                                           .BYTE
EMT
                                                                     31.,2.
+0<377>
         011356
                   194377
   2070 011360
                   105767
                             166422
                                                           TSTB
                                                                     STAT
                                                                                         :GOOD RETURN
   2071 011364
                   003433
                                                           BLE
                                                                     ABEND.
                                                                                         :NO:
   2072
   2073
                                                           ISSUE-GCML
   2074
   2075 011366
                   022767
                                       166416
                                                           CMP
                                                                     #MEST, ERWORD
                                                                                         :PROMPT - WITH - MESSAGE
   2076 011374
                   002424
                                                           BLT
                                                                     TTX-
                                                                                         ;NO, JUST EXIT
   2077
   2078 011376
                   012700
                             0000321
                                                                                         :POINT.TO.GCML.BUFFER:
:NUMBER.OF.WORDS:
                                                           MOV
                                                                     #GCMBUF,R0
   2079 011402
                   012701
                             000051
                                                           MOV
                                                                     #41..R1
   2080 011406
                   005020
                                                 3$:
                                                           CLR
                                                                     (RØ)+
                                                                                         :CLEAR · BUFFER
   2081 011410
                   005301
                                                           DEC
                                                                     R1
   2082-011412
                   001375
                                                           BNE
   2083
   2084
         011414
                                                           GCML $
                                                                     #GCMBLK
         011414
011420
                   012700
                             0033221
                                                           MOV.
                                                                     #GCMBLK.R0
G.PSDS(R0)
                   005060
                             888142
         011424
                   004767
                             000000G
                                                                     PC. GCML1
                                                           JSR.
   2085 011430
                   103411
                                                           BOS
                                                                     ABEND.
                                                                                                                       7
                             000146 .166514
0000321 166510
   2086 011432
                   016067
                                                                                                                             · 7.
                                                           MOV-
                                                                     G.CMLD(R0),GCMLEN:;SAVE LENGTH
                                                                     #GCMBUF,GCMPNT ; INITIALIZE COMMAND BUFFER @OINTER-ERWORD ; CLEAR FRROR NI MDEG TURE
   2087 011440
                   012767
005067
                                                           MOV.
   2088
         011446
                             166349
                                                 TTX:
                                                           CLR -
                                                                                         :CLEAR ERROR NUMBER INDICATOR
   2089 011452
                   000207
                                                           RTS
                                                                                         : AND - RETURN -
                                                                                                          2090
         011454
   209 i
                                                 ABEND:
                                                           ABRT$S
                                                                     #MYSELF -
                   012746
017646
         011454
                                                                    #MYSELF. (SP)
@(SP). -(SP)
#2,2(SP)
@2(SP).2(SP)
                             000000
                                                                                                        - TT
                                                           MOV.
         011460
                             000000
                                                           MOV
         011464
011472
                   062766
017666
                                       000002
                                                           ADD.
                             000002
                                       .000002
                                                           MOV
         011500
                   012746
                                                           MOV
                                                                     (PC) + . - (SP)
         011502
                      123
                                 003
                                                           .BYTE
                                                                     83.,3
+0<377>
         011504
                   104377
  2092
2093
                   003630*
                                                           .END
                                                                     START.
```

The Alexander

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TMT----- MACRO-M1110 27+MAR-80 15:38 PAGE 28-2
SYMBOL-TABLE Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
SYMBOL TABLE
       = 0000001
                                        001276RG
                                                             FN.FSC.
                                                                       000004
                              CK2
                                                                                      004 GCMBLK
                                                                                                                         MT10
                                                                                                                                   000026R
AREND
                              CK3 001300RG
CMILUN=-000002-
                                                                                      004 GCMBUF
         011454R
                                                                       000020
                                                                                                     888832R
                                                                                                                         MYSELF 000000R
ABEND2 - 011022R
                                                             FH.MHR
                                                                       000010
                                                                                      994 GCMLEN
                                                                                                     000154R
                                                                                                                         Ν.
                                                                                                                                 = .000012
          003634R
                              CHUM- = 0000006
                                                             FH. HMB
                                                                       000022
                                                                                      004 GCMPNT
                                                                                                     000156R
                                                                                                                         -- NEST
                                                                                                                                · = 1000014*
ALLSEL
          011230R
                              CONSOL
                                        010702R
                                                             FM.QLS
                                                                       000006
                                                                                      004 GE.BIF=
                                                                                                     177775
                                                                                                                         NESTOP 011154R
ALLSTR -
          000401R
                              CTBL
                                        000430R
                                                             FH.RDC
                                                                       000014
                                                                                      004 GE.CLO= 000004
                                                                                                                         N.BFAC = 000004
ALLTST=
         . 000010
                              CHRLIM
                                        001150R
                                                             EN.LIPD
                                                                       000012
                                                                                      004 GE.COM= 000001
                                                                                                                          N.BHGH= 000006
AMSG
                              DBSLEN= . 000116
          001355R
                                                             FSECX:
                                                                       010404R
                                                                                           GE.CON= 000020
GE.EOF= 177766
                                                                                                                         N.BTCH= 000004
ASCIZ
                              DG.ERR= 001000
                                                                                                                         N.BUFB= 004000
N.BUFW= 002000
                                                             FTBL
                                                                       001417R
ASCNST
          010670R
                              DG.SDF=-002000
                                                             F.ACTL=
                                                                       000076
                                                                                           GE. IND = 000002
                              DG.TDF= 004000
DOUBLE 010540R
                                                                                          GE.INP-00002
GE.IOR= 177777
GE.LC = 000010
GE.MEE 177774
GE.OPR= 177776
AST
                                                             F.ALOC= 000040
F.BBFS= 000062
          007206R
                                                                                                                          N.DID = 000024
ASTURD
          000004R
                                                                                                                         .N.DVNM= 000032
N.FID = 000000
                                                             F.BDB = 000070
F.BGBC = 000057
F.BKDN = 000026
ASWRK
          001316R
                              EAST
                                        007564R
       = 0000002
                              EFH.1 = 000001
EMSG 001366R
                                                                                                                         N.FNAM= 000006
N.FOS = 000764
N.FTYP= 000014
          000024R
                                                                                           GE:RBG=-177730
BEGTST-
          011070R
                              EHDL IM
                                        004240R
                                                             F.BKDS= 000020
                                                                                           GE:SIZ= 000040
BINUD.
          999916R
                              ENDLH - = ENDOF -
                                        000014
                                                             F.BKEF=-000050
                                                                                           G.CMLD= 000146
                                                                                                                          N.FVER= 000016
BITVAL = . 000000
                                         003306R
                                                                                           G. DERM=.000160
B.ERR = .000140
G.ISIZ= 000020
                                                                                                                         N.NEXT= 000022
N.QURY= 000031
N.STAT= 000020
                                                             F.BKP1=-000051
BITO
       = · 000001
= · 000002
                                         011054R
                                                             F.BKST= 000024
                              ENDTST
BITI
                              ERLIM
                                        000014R
                                                             F.BKVB= 000064
BIT10
       = 002000
                              EROPT
                                                             F.CHR = 000075
F.CHTG = 000034
                                         011154R
                                                                                           G.LPDL=:000060
G.MODE= 000141
                                                                                                                         N.SUNT= 000002
                              ERPRMT
BIT11 = 004000
                                         005160R
                                                                                                                         N.UNIT= 000034
BIT12 = 010000
BIT13 = 020000
                              ERRADD
                                         001304RG
                                                             F.DFNB= 000046
                                                                                           G.PSDS=-000142
                                                                                                                                 - 000020
                                                                                                                          \Omega.
                                                                                           G.PSDS= 000142
G.SIZE= 000224
HALT = 000020
HLTTST 011060R
I = 000010
                              ERROT.
                                                             F.DSPT= 000044
F.DVNM= 000134
                                         001306RG
                                                                                                                          ÕUT1
                                                                                                                                    011074R
                                                                                                                         PACK
                               ERROR -
                                         000040
                                                                                                                                    010412R
BIT15 = 100000
                              ERRORX
                                         007170R
                                                             F.EFBK= 000010
                                                                                                                                    999927
BIT2 - 000004
                              ERR10
                                         011110R
                                                             F.EFH -- 000050
                                                                                                                          PASS
                                                                                                                                    000162R
        = 0000010
                               ERR11
                                                                                           IO.ATA= жжжжжж GX-
IO.WVB= жжжжжж GX-
                                         011104R
                                                             F.EOBB=-000032
                                                                                                                          PASSC -
                                                                                                                                    010510R
       = · 000020
= · 000040
                              ERR12
BIT4
                                         011100R
                                                             F.ERR -- 000052
                                                                                                                                    000160R
BIT5
                              ERR2
                                         011150R
                                                             F:FACC=-000043
                                                                                           JMPMT.
                                                                                                     005614R
                                                                                                                          PASSX
                                                                                                                                    010666R
        = 000100
                               ERR3
                                                             F.FFBY= 000014
BIT6
                                         011144R
                                                                                           LASTJ.
                                                                                                     006036R
                                                                                                                          PAST
                                                                                                                                    007600R
        = 000200
                               ERR4
                                         011140R
                                                             F.FNAM= 000110
                                                                                           LASTJ1
                                                                                                     006040R
                                                                                                                          PCLCX
                                                                                                                                    010444R
        = 000400
                               ERR5
                                                             F.FNB - = 000102
BIT8
                                         011134R
                                                                                           LIMITS.
                                                                                                     010002R
                                                                                                                          PLIM
PMPTA
                                                                                                                                    004064R
BIT9
        = 001000
                               ERR6
                                         011130R
                                                             F.FTYP= 000116
                                                                                           LIMNUM= · 000014
                                                                                                                                    011220R
BYTE@
        = 000000
                                        011124R
011120R
                              FRR7
                                                             F:FVER=:000120
                                                                                           LIMREF.
                                                                                                                          PMPTB
                                                                                                                                    011214R
BYTE: - 000001
                               ERR8
                                                             F.HIBK= 000004
F.LUN = 000042
                                                                                           LIMX:
LIMX2:
LOOP:
                                                                                                     010164R
                                                                                                                          PMPTC
                                                                                                                                    011210R
BYTE2 - = - 000002
                               ERR9
                                         011114R
                                                                                                     010200R
                                                                                                                          PMPTI
                                                                                                                                    011204R
BYTE3 = 000003
                               ERWORD
                                                             F.MBCT= 000054
                                         000012R
                                                                                                                          PMPTO
                                                                                                   = .000001
                                                                                                                                    011200R
BYTE4 = 0000004
                                                                                                                          PMPTT
                              ERW1
                                         001310RG
                                                             F.MBC1= 000055
                                                                                           LOOPCT-
                                                                                                     000164R
                                                                                                                                    011174R
BYTE5 = 000005
                               ERW2
                                         001312RG
                                                             F.MBFG= 000056
                                                                                           LOWER
                                                                                                     000022R
                                                                                                                          PMPT10
                               ERW3
                                         001314RG
                                                             F.NRBD= 000024
                                                                                           LPRMPT.
                                                                                                     005032R
                                                                                                                          PMSG.
                                                                                                                                    001330R
BYTE7 = 0000007
                               FD.CCL=
                                                               .NREC=-000030
                                                                                           LPTST
                                                                                                     011160R
                                                                                                                          PMSG2
                                                                                                                                    003272R
BYTE8 - - 000010
                                                        003 F.OVBS = 000030
003 F.RACC = 000016
                               FD.FID
                                         ававава
                                                                                           LUN.TT=
                                                                                                                          PM2LN
                                                                                                                                    000014
BYTE9 = 000011
                               FD:FNB
                                         000006
                                                                                                     -000006
-006540RG
                                                                                           MEM.
                                                                                                                          PREADD.
                                                                                                                                    001302RG
                                                             F.RATT-
BYTYAL = - 000012
                               FD.FYR
                                         000004
                                                                       000001
                                                                                           MEMERR .
                                                                                                                          PRINT.
                                                                                                                                    001465R
                                                        003 F.RCNM=-000034
F.RCTL=-000017
F.RSIZ=-000002
       = .000004
                               ED:LEN
                                         000010
                                                                                                      011224R
                                                                                           MEMSEL
                                                                                                                          PSECX
                                                                                                                                    010450R:.
CAST.
          007460R
                               FD.REC=
                                         жжжжжж GX
                                                                                           MEMTOP
MOVE
                                                                                                     004012R
003706R
                                                                                                                          REST
                                                                                                                                    007652R
CF:COT= 000041
                               FD.TTY
                                         жжжжжж БХ
                                                                                                                          RMSG
                                                                                                                                    001400R
CF:DGN=-000046
                               FIND.
                                         010274R
                                                             F:RTYP= 000000
                                                                                           MS.DGN=
                                                                                                     010000
                                                                                                                          SCAN
                                                                                                                                    010202R
CF.DHR= 000042
                                                             F.SEQN= 000100
F.SPDV= 000072
                                         991335R
                               EMSG -
                                                                                           MTCHT:
                                                                                                      000172R
                                                                                                                          SELECT
                                         010216R
                                                                                           MTJUMP
                                                                                                     006530R
                                                                                                                          SEL DOP
                                                                                                                                    004314R
                                                             F.SPUN= 000074
F.STBK= 000036
F.UNIT= 000136
CF:HBR= 000045
                               FHMTCH
                                         010252R
                                                                                                      005400R
                                                                                            MTMA IN
                                                                                                                          SELTSI
                                                                                                                                    011170R
CF:HRL= 000044
                               ENOUT1
                                         010210R
                                                                                            MTPHT
                                                                                                      000170R
                                                                                                                          SERR
                                         010230R
                               FHOUT2
                                                                                            MTREE
                                                                                                     000460R
003764R
                                                                                                                          SETTBL.
SR. ARE
                                                                                                                                    000174R
000114
                                                        004 F.URBD= 000020
004 F.VBN = 000064
                                                                                                                                             982
CHECK -
          004616R
                               FH.ACK
                                         000016
                                                                                            MTRTH
CHECK®
          005000R
                              EN.ESA
                                         ававава
                                                                                           MTSET
                                                                                                      005304R
                                                                                                                          SR.ARS
                                                                                                                                    000106·79
                                                        004 F.VBSZ= 000060
          001274RG
                              FN.FSB
CKDATA
                                         000002
                                                                                           MTSUB
                                                                                                     000730R
                                                                                                                                    000010
                                         Approved For Release 2005/07/12
                                                                                  CIA-RDP85-00514R000200020001-3
```

. 002

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P0 M1110 27-MAR-80 15:38 PAGE 28-3
Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
SYMBOL - TI
SR.DLT.
          000014
                         002 · S : FNAM= · 000006
                                                            T$BT- =-000020
                                                                                         T$1CLK=-000400
                                                                                                                                 001412R
                                                                                                                       UNMSG
                         002 · S : FNB · = · 000036
SR.ECB.
          000047
                                                            T$BTAR=:000030
                                                                                          T$8BEN=:000020
                                                                                                                       UNPK
UPPER
                                                                                                                                 010454R
SR.ECH.
                         002-S.FNBW=-000017
                                                            T$BTD - - 002000
                                                                                         Τi
                                                                                                   006064R
                                                                                                                                 00002NR
SR.ECL
SR.FIB
          000050
                         002 S.FNTY= 000004
                                                            T$CD - - 000100
                                                                                         T1ADDR: 001214R
                                                                                                                       USRTST.
                                                                                                                                 011164R
                                                            T$CLK = 002000
          000012
                         002 S.FTYP= 000002
                                                                                                                       WAST 007306R
WORDO = 000000 .
WORD1 = 000002
                                                                                         TIF
                                                                                                 = · ********* GX±
                        002 S.NFEN= 000020
SR.GRE
          000100
                                                            T$DISK= 000200
T$DRD = 000004
                                                                                                 = ***** GX
                                                                                         TII
SR.GRS
          000072
                                       000040
                                                                                                 =·********* GX
SR.LEH
          888122
                         002 · TAST ·
                                        007502R
                                                            T$EMEM= · 010000
                                                                                         TIT
                                                                                                 =·******** GX-
                                                                                                                                 000004
SR.LIH
          000066
                         002 - TODADD
                                        001244R
                                                            T$FSAA= 000000
                                                                                         Tie
                                                                                                   006274R -
                                                                                                                       WORD3
SR.LIP
                         002
                             TCUADD
                                                            T$FSAB= 000004
                                       001260R
                                                                                                   006300R
                                                                                                                       MORD4
                                                                                                                                 000010
SR. MOH
          000006
                             TD$CTR= 176370
                                                            T$FSAC=:0000014
                         002
                                                                                                   006424R
                                                                                                                       WORD5
                                                                                                                                 000012
SR. HDC
          000042
                         992
                             TD$CTW= 176360
                                                            T$FS82=-000010
                                                                                         T12FD - = - ****** GX
                                                                                                                       WORD6
WORD7
                             TD$INL= 004000
SR.HDS
                         002
                                                                                                T$IB: =:000026
                                                                                          T12FU
                                                                                                                                 000016
SR:HIH
          000030
                         002
                             TD$MEM= 000270
                                                            T$IBAR = . 000024
                                                                                          T12ID
                                                                                                 = - жүкүкүк
                                                                                                                       WORD8
                                                                                                                                 000020
SR:NIP
          000022
                         002·TD$OAR=-176344
                                                            T$IBE - - 020000
                                                                                         T12IU-
T120D-
                                                                                                 = · ******** G⊠
                                                                                                                       WORD9 = 000022
SR.SDB
          000032
                                                            T$IBF - = 040000
T$ICD - = 000040
T$MODE = 004000
                         002 · TD$0TR = · 176346
                                                                                                 = · ******** GY
                                                                                                                       WRDVAL = . 000024
SR:SRC
          000002
                             TD$QRD= 000274
                         002
                                                                                         T120U-
                                                                                                 =· жжжжжж GX
                                                                                                                       ZREL
                                                                                                                                 004402R
SR:SUN
SR:TWS
          папапап
                         002·TD$RST= 176366
                                                                                         T12TD = ******** GX*
T12TU = ********* GX*
                                                                                                                       $CBDSG= ******** GX
                             TD$SW-≕-176376
          000056
                         002
                                                            T$0B - - 000036
                                                                                                                       $CBOMG= · ****** GX
$CDTB · = · ****** GX
SR.WSL
                             TD$TAR= 176372
          000052
                         002
                                                            T$0BE - - 004000
T$0BF - - 010000
                                                                                                   006074R
SR,YR.
          000004
                         002
                             ·TD$TAW= · 176362
                                                                                          T.3
                                                                                                   006110R
                                                                                                                       $C0TB - = - ********
                                                                                                                                          GX.
SR:1IN
          999924
                         002
                             ·TD$TDR= · 176374
                                                            T$0BRA= 000034
                                                                                          T4
                                                                                                   006126R
                                                                                                                       $DDIV = · ******** GX
$DIV = · ******** GX
SR:11P
          000016
                         002 · TD$TDW= · 176364
                                                            T$0BWA=-000032
                                                                                                   006144R
                                                                                          T5
STADDR
                              TESTS - 000014
                                                            T$0UTA= 100000
                                                                                                   006174R
                                                                                                                              = зоюножжж <u>Б</u>Х
                                                                                          T6
                                                                                                                       $MUL
                                                           T$RBD0=-000200
T$RNB =-000040
START-
          003630R
                              TEST10=-000004
                                                                                         T6CHK -
                                                                                                   004574R
                                                                                                                               = 003502R
STAT.
          000006R
                              TEST6 = 0000002
                                                                                         T6FACT-
                                                                                                   000030R
                                                                                                                       $$$ARG= 000002;
STOP
          011064R
                              TMSG
                                        001323R
                                                            T$RSET= 040000
                                                                                                                       $$$T1 = 000067
$$$T2 = 000027
                                                                                                   006200R
001230R
STRLEN= . 000027
                              TROCT
                                        999292R
                                                            T$SC+
                                                                  = - 000022
                                                                                         TZADDR -
STUFF -- ****** GX
                              TRT.
                                        004344R
                                                            T$SCLK = 020000
                                                                                                                       .FSRCB= жкжжжжк G
.GGML1≕%жжжжжж G
STUFI -- ****** GX
                                        011446R
                                                            T$SEG1 = . 000000
                                                                                         T7 I
                                                                                                 = - жоюжожок - БХ-
STUFO: =: ****** GX
                              T$AD.
                                     = 0000020
                                                            T$SEG2=-000001
                                                                                                                       ...PC1= 003322R
...,PC2= 003524R
                                                                                         T70
                                                                                                 = · ********* GX
STUFT = ****** GX
                              T$BA = 000002
                                                            T$SEG3=.000002
                                                                                                 = · жожыхыжж . GX ·
                                                                                         T7T
S.BFHD= 000020
                                     = .000010
                              T$RD.
                                                           T$SO - - 000001
                                                                                                   006210R
                                                                                                                       ...PC3= 003322R
                                                                                         T8
S.FATT= 000016
                              T$BSO - = - 100000
                                                            T$UBUS = 100000
                                                                                                                       ...TPC=-000020
S.FDB - = - 000140
. ABS:
          000000
                       000
          011506
                       001
SROOFE
          000122
                       002
FDSCOF
          000010
                       003
FNOFFS
                       004
$$FSR1
          001020
ERRORS DETECTED:
                      Й
VIRTUAL MEMORY-USED: 7110 WORDS- (-28 PAGES)
DYNAMIC MEMORY: 8084 WORDS (31 PAGES)
ELAPSED TIME: 00:01:25
TMT, FMT/-SP=[20, 13P, C, TMT
```

TMT ---

```
. , , , . . .
TTEST- .. M
              PO⋅M1110 27-MAR+80 15:41 PAGE⋅8
                                          Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
                                                             .FITLE..FTEST...
.PSECT: TTEST.
.LIST: MEB:
         000000
       234567
                                                             TERM DETECTOR MEMORY DIAGNOSTICS
       8
      10
                                                             TEST-ROUTINES-FOR-FSA'S-
      13
      14
15
                                                             THIS ROUTINE WRITES AND READS THE TEST PATTERN CONTAINED
                                                             IN "CKDATA"
      16
17
                                                                                                                           ---
          000000
                                                   STUFF::
                                                                       2(SP).PREADD
PREADD.TD$TAW
      18
         000000
                    016667
                              000002.
                                        000000G
                                                             MOV
      19
         000006
000014
                              000000G-176362-1$:
                    016767
                                                             MOV
      20
21
22
23
                    004767
                              000474
                                                             JSR
INC
                                                                       PC.WRITE.
          000020
                    005267
                              000000G
                                                                       PREADD.
         . 000024
000032
                              000004 000000G
                                                                       4(SP).PREADD
                    026667
                                                             CMP .
                                                                                            :CHECK FOR UPPER LIMITS
                    103365
                                                             BHIS
      25
                                                                       2(SP).PREADD
2(SP).TD$TAW
          000034
                    016667
                              000002
                                        000000G
                                                             MOV.
      26
27
         000042
000050
                    016667
                              000002
                                                             MOV.
                    004767
                              000464
000000G
                                                  2$:
                                                             JSR
                                                                       PC.READ
          000054
                    005267
                                                                       PREADD.
4(SP),PREADD.
                                                             INC
      29
30
31
                    026667
103370
000207
         000060
                              000004 0000006
                                                             CMP
                                                                                           :CHECK FOR UPPER LIMITS
                                                             BHIS
                                                                       2$
          000070
                                                             RTS.
                                                                       PC.
      32
34
35
36
                                                             TEST-01
                                                             WRITE ADDRESS INTO ITSELF
      37
      38
         000072
000072
      39
                    016667
                              000002
000002.
                                        000000G
                                                             MOM
                                                                       2(SP).CKDATA
                                                                                           :ADDRESS IS TEST PATTERN.
      40
          000100
                    016667
                                        000000G
                                                                       2(SP),PREADD
PREADD,TD$TAW
PC,WRITE
                                                             MOV:
      41
          000106
                    016767
                              000000G 176362 1$:
                                                             MOV
                    004767
005267
005267
      42
          000114
                              000374
      43
          000120
                              000000G
                                                             INC
                                                                       CKDATA:
                              000000G
          000124
                                                             INC
                                                                       PREADD
      45
          000130
                    026667
                              000004 000000G
                                                                       4(SP), PREADD.
                                                                                            ; CHECK · FOR · UPPER · LIMITS
      46
47
          000136
                    103363
                                                             BHIS
                              000002.
000002
      48
          000140
                    016667
                                        000000G
                                                             MOV.
                                                                       2(SP),CKDATA
                                                                                           ;ADDRESS IS TEST PATTERN
                                        000000G
      49
          000146
                    016667
                                                             MOV-
                                                                       2(SP),PREADD
2(SP),TD$TAW
PC,READ
      50
51
52
          000154
                    016667
                              000002
                                        176362
                                                             MOV.
         000162
000166
                    004767
005267
                              000352
                                                             JSR
                              000000G
                                                             INC
      53
         000172
                    005267
                                                             INC
                                                                       PREADD
      54 000176
55 000204
56 000206
                    026667
103366
                              000004 000000G
                                                                       4(SP),PREADD.
2$
                                                                                           :CHECK · FOR · UPPER · LIMITS
                                                             BHIS
                    000207
                                                             RTS.
                                                                       PC
```

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TTEST- - MACRO-M1110 27-MAR-80 15:41 PAGE-8-1
                                            Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
      58
      59
                                                                TEST-06
      60
                                                                MEMORY CROSS-TALK TEST
      61
      62
          000210
      63
                                                     T6F::
                                                                                                :SET LOOP COUNT
:SET TEST PATTERN TO ALL 1'S
:SET UP START ADDRESS
      64
                                                                MOV
                                                                          #10..R2
      65
                                                                MOM:
                                                                           #-1.CKDATA
      66
67
68
                                                                          2(SP).PREADD
PREADD.TD$TAW
                                                     :105:
                                                                MOV-
                                                                MOV
                                                                                                *MOVE ADDR TO TRANSFER REG
*WRITE *CKDATA* TO 3 SEGS
*SKIP AN ADDRESS
                                                     :15:
                                                                JSR
                                                                          PC. WRITE
                                                                ADD
                                                                           #2,PREADD.
      70
71
                                                                CMP
                                                                          4(SP),PREADD
                                                                                                :FINISHED
                                                                BHIS
                                                                          1$
                                                                                                ;NO, CONTINUE.
;SUB-FROM-LOOP-COUNT.
      72
73
74
75
76
77
78
79
                                                                DEC
                                                                BNE
                                                                          10$
                                                                                               CLR
                                                                          CKDATA:
                                                                          2(SP),PREADD.
                                                                MOV.
                                                                INC
                                                                          PREADD, TD$TAW
                                                                MOV
                                                                JSR
                                                                          PC, READ.
                                                                                                :READ AND COMPARE
                                                                ADD
                                                                          #2,PREADD
      81
                                                                CMP
                                                                          4(SP).PREADD
                                                                                                :FINISHED
      82
                                                                BHIS
                                                                          2$
                                                                                                ;NO:
          000210 000207
      84
      85
86
                                                                TEST-07
      87
                                                               WRITE/READ ALL ADDRESSES WITH ADDRESS COMPLEMENT
      88
      89
          000212
000212
      90
                                                     T7F::
                                                                                               ;LOAD-ADDRESS:
;SET-UP:START-ADDRESS:
;GET-ADDRESS:COMPLEMENT:
;SET-TEST-PATTERN:
;MOVE-ADDR:TO:TRANSFER:REG:
;WRITE:"CKDATA":TO:3 SEGS:
;BUMP:TO:NEXT-ADDRESS:
;SET-R2:TO:NEXT-ADDRESS:
;FINISHED:
                     016602
                               000002
                                                                MOV
                                                                          2(SP),R2-
      92
          000216
                     016667
                               000002
                                         000000G
                                                                MOV
                                                                          2(SP), PREADD.
      93
          000224
                     005102
                                                                COM
                                                                          R2 -
          000226
                     010267
                               000000G+
                                                                MOV
                                                                          R2.CKDATA
      95
          000232
                     016767
                               000000G-176362
                                                                MOV
                                                                          PREADD, TD$TAW
      96
          000240
                     004767
                                                                JSR
                                                                          PC.WRITE PREADD
          000244
000250
000254
      97
                     005267
                               000000G.
                                                                INC
      98
                     016702
026667
                               000000G
                                                                MOV
                                                                          PREADD.R2
                               000004
                                          000000G
                                                                CMP
                                                                          4(SP), PREADD
                                                                                                :FINISHED
     100
          000262
                     103360
                                                               BHIS
                                                                          15
                                                                                                :NO, CONTINUE.
     101
          000264
     102
                     016667
                               000002
000002
                                                                                                :MOVE START ADDRESS TO TRANS REG:
:SET R2 - ADDRESS - - :
:RESET START ADDRESS
                                          176362
                                                                MOM
                                                                          2(SP),TD$TAW
     103
          000272
                     016602
                                                                MOM
                                                                          2(SP),R2.
2(SP),PREADD
     104
          000276
                     016667
                                000002
                                          000000G
                                                                MOV
     185
          000304
                     005102
                                                                COM
                                                                          R2.
                                                                                                :GET ADDRESS COMPLEMENT:
:SET TEST PATTERN:
     106
          000306
                               000000G
000222.
                     010267
                                                                MOV
                                                                          R2.CKDATA
     107
          000312
                     004767
                                                                                                READ AND COMPARE
BUMP ADDR
SET R2 = NEXT ADDRESS
                                                                JSR
                                                                          PC.READ.
     100
          000316
                     005267
                               00000G
                                                                INC
                                                                          PREADD.
     109
          000322
                     016702
                               000000G
                                                                MOM
                                                                          PREADD, R2
          000326
                    026667
     110
                               000004 000000G
                                                                CMP
                                                                          4(SP).PREADD
                                                                                                :FINISHED
     111
         000334
                     103363
                                                               BHIS
                                                                          2$
                                                                                                :NO-
                                                                                                                              • 000336
                    000207
                                                               RTS
     113
     114
                                            Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
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RO M1110 27-MAR-80 15:41 PAGE 8-2.
Approved For Release 2005/07/11 IA-RDP85-00514R000200020001-3
TTEST- .. M
    115
    116
                                                       ADDRESSING TEST
    118
        000340
    119
        000340
    129
                  016667
                           000002
                                    000000G
                                                                 2(SP),PREADD.
                                                                                   ;GET·START·ADDRESS
;GET·READ·PATTERN·
    121
         000346
                           000000G-000000G-1$:
                  016767
                                                       MGV-
                                                                 CK2,CKDATA.
         000354
                  016767
                           000000G-176362
                                                       MOV
                                                                 PREADD, TD$TAW
    123
         000362
                  004767
                                                                PC.READ
CK3.CKDATA
                                                        JSR.
    124
         000366
                  016767
016767
                           000000G · 000000G
                                                        MOV
                                                                                   :GET-WRITE-PATTERN
         000374
                           000000G-176362-
                                                        MOV
                                                                 PREADD, TD$TAW
         000402
                           000106
                  004767
                                                                 PC.WRITE #1.PREADD
                                                        JER
    127
         000406
                  062767
                           000001
                                     000000G
                                                        ADD
        000414
    128
                  026667
                           000004
                                    000000G
                                                                 4(SP).PREADD
         000422
                  103351
                                                       BHIS
                                                                 1$
    139
        000424
                  000207
                                                       RTS
                                                                 PC:
    131
         000426
                                              T12FU::
    133
         000426
                  016667
                           000004
                                    000000G
                                                       MOV
                                                                 4(SP),PREADD
                                                                                   :START-ADDRESS-=-UPPER-LIMIT
    134
         000434
                  016767
                           000000G 000000G 1$:
                                                                CK2.CKDATA
PREADD.TD$TAW
                                                       MOM
                                                                                   :READ PATTERN
         000442
    135
                  016767
                           000000G-176362-
         000450
                  004767
                           000064
                                                       JSR
MOV
                                                                 PC.READ
    137
         000454
                  016767
                           000000G · 000000G
                                                                 CK3,CKDATA
                                                                                   : WRITE - PATTERN
    138
         000462
                  016767
004767
                           000000G-176362
                                                       MOV
                                                                 PREADD,⊤D$TAW
         000470
                           000020
                                                                 PC.WRITE
    140
         000474
                  162767
                           000001
                                     000000G
                                                       SUB
                                                                 #1.PREADD
         000502
                  026667
003751
    141
                           000002
                                                       CMP
BLE
                                                                2(SP).PREADD
         000510
    143
         000512
                                                       RTS
                                                                PC
    144
    145
    146
    147
    148
                                                       WRITE SUBROUTINE ....
    149
        000514
000522
    159
                  016767
                           000000G-176364
                                                       MOV.
                                                                CKDATA, TD$TDW
    151
                  016767
016767
                           000000G-176364
                                                       MOV.
                                                                CKDATA, TD$TDW
         000530
                           000000G-176364
                                                                 CKDATA, TD$TD₩
    153
         000536
                  000207
                                                       RTS -
    154
    155
    156
                                                       READ.
                                                              SUBROUTINE...
    157
158 000540
                                              READ:
    159
        000540
                                                       SAVE
                                                                R1.R2,R3
         000540
                  010146
                                                       MOV-
                                                                R1,-(SP)
R2,-(SP)
         ййй542
                  010246
                                                       MOV
         000544
                  010346
    161
         000546
                           176374
                                                       MOV
                                                                 TD$TDR,R1
        . 000552
000556
                  020167
001403
    162
                           000000G
                                                       CMP
                                                                Ri,CKDATA
    163
                                                       BEQ.
    164
        00056'0
                  004767
                           000100
                                                       JSR.
                                                                PC.PRPERR
    165
        000564
                  000424
                                                       BR.
                                                                READX.
    166
        000566
                           176374
                  016701
                                              1$:
                                                       MOV
                                                                 TD$TDR,R1
        000572
                  020167
                           000000G
                                                       CMP
                                                                R1.CKDATA
    168 000576
                 001403
                                                       BEQ.
                                                                2$
                                      Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3.
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```
TTEST- - MACRO - M1110 27-MAR-80 15:41 PAGE - 8-3
                                        Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
                   004767
                                                                    PC, PRPERR
     169 000600
                                                          JSR
                             000060
     170
                                                                    READX
         000604
                   000414
                                                          BR
     171
         000606
                   016702
                             176374
                                                          MOV
                                                                    TD$TDR,R2
         000612
                             000000G
                                                          MOV
                                                                    CKDATA, R3
    173 000616
174 000622
                   042702
                             000777
                                                          BIC
                                                                    #000777,R2
                                                                                       :CLEAR 9 BITS
                             000777
                   042703
                                                          BIC
                                                                    #000777,R3
         000626
                   020203
                                                          CMP
                                                                    R2,R3
    176
177
         000630
                   001402
                                                          BEQ
         000632
                   004767
                             000026
                                                          JSR.
                                                                    PC, PRPERR
     178
         000636
                                                READX:
                                                          RESTOR
                                                                    R1.R2.R3
                   012603
012602
012601
         000636
                                                          MOV
                                                                    (SP) + R3
         йййбай
                                                          MOV.
                                                                    (SP) + R2
         000642
                                                          MOV
                                                                    (SP)+_{\star}R1
     180 000644
                   000207
                                                          RT5
                                                                    PC
     181
     182
     183
                                                          READ.WITHOUT COMPARE
     184
     185
     186
         000646
                                                READ1:
                   016746
016716
016726
     i 87
         000646
                             176374
                                                          MOV
                                                                    TD$TDR.-(SP)
                                                                    TD$TDR,(SP)
TD$TDR,(SP)+
     188
         000652
000656
                             176374
                                                          MOV
                             176374
                                                          MOV
     190
     191
     192
     193
                                                          PREGARE TO CALL ERROR ROUTINE
     194
     195
         000664
                                                PRPERR:
                   016767
016767
012767
         000664
000672
     196
                             000000G-000000G-
                                                          MOV
                                                                    PREADD, ERRADD
     197
                             000000G 176362
000003 000000
                                                          MOV:
                                                                    ERRADD,TD$TAW
                                                                                        :SET-ERR ADDRESS
         000700
                                       000000G
                                                          MOV
                                                                    #3.ERRCT
                                                                                        SEGMENT COUNT
          000706
     199
                             176374
                   016767
                                       000000G
                                                          MOV
                                                                    TD$TDR,ERW1
                                                                                       :READ SEGMENT 0 :READ SEGMENT 1
                             176374
176374
000777
     200
         000714
                   016767
                                       000000G
                                                          MOV
     281
         000722
                   016767
                                       000000G
                                                          MOV
                                                                    TD$TDR,ERW3
                                                                                        ; READ - SEGMENT - 2
     202
         000730
                   042767
                                       000000G
                                                          BIC
                                                                    #000777.ERW3
     203
     204
                                                          RETRY-READ-
     285
     206
          000736
                   012746
                             999995
                                                          MOS
                                                                    #5,-(SP)
                                                                                        :NUMBER - OF - RETRIES
          000742
                   016767
                             000000G-176362-
                                                RR1:
                                                          MOV
                                                                    ERRADD.TD$TAW
     208
          000750
                   016746
                             176374
                                                          MOV
                                                                    TD$TDR,-(SP)
                                                                                        :READ - SEG - 1
                                                                                       :SEG-2
     289
          000754
                   016746
                                                                    TD$TDR,-(SP)
     210
211
         000766
                   016746
                             176374
                                                          MOV
                                                                    TD$TDR,-(SP)
#000777,(SP)
          000764
                   042716
                             000777
                                                          BIC
          000770
                   022667
                                                                                       ;SAME AS PREVIOUS ;
;NO, ERROR UNPREDICTABLE
                             000000G
                                                          CMP
                                                                    (SP)+,ERW3
     213
         000774
                   001012
                                                          BHE
                                                                    1$
         000776
     214
                   022667
                             000000G
                                                                     (SP)+,ERW2
                                                                                        :SAME AS PREVIOUS
     215
         001002
                   คิด (ค.1.1
                                                          BNF
                                                                    2$
                                                                                        :N0
     216
217
218
         001004
                   022667
                             000000G
                                                                    (SP)+,ERW1
                                                          CMP
                                                                                        ;SAME
         001010
                   001010
                                                                    3事
                                                                                        :NO
                   005316
                                                          DEC
                                                                    (SP)
                                                                                        ;SUB · FROM · # · RETRIES
     219
         001014
                   001352
                                                                    RR 1
                                                          BNE
     220
         001016
                   005726
                                                           TST
                                                                    (SP)+
    221
222
         001020
                   000411
                                                                    CALLER
                                                                                       :CALL · ERROR · REPORTING · ROUTINE ·
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```

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; INDICATE · UNPREDICTABLE · RESULTS ·

223 001022-224 001026 225 001032-226 001036 227 228 001044 229 001050 #2,SP. #2,SP. #2,SP. #-1,ERRCT. ADD · ADD · ADD · MOV · 000002 000002 1\$: 2\$: 062706 062706 000002 : 177777: 000000G 062706 3\$: 012767

000000G

004767 000207 CALLER: JSR-RTS-PC.MEMERR PC.

```
1 fr
TTEST - MACRO M1110 27-MAR-80 15:41 PAGE_9
                                          Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
    231
232
233
234
235
                                                               INPUT-BUFFER TESTS
     236
                                                               WRITE AND READ THE TEST PATTERN
     237
238
         001052
001052
                                                    STUFI::
     239
                    016667
                               000002
                                         000000G
                                                                         2(SP),PREADD
                    016701
016711
     240
          001060
                               000000G
                                                    15:
                                                              MOM
                                                                         PREADD, R1
CKDATA, (R1)
          001064
001070
     241
                               000000G
                                                              MOV
     242
                                                                         #0.TD$SW.
                    012767
                               000000
000002
                                         176376
000000G
                                                               MOV.
     243
          001076
                     062767
                                                              ADD :
     244
         001104
001112
                    026667
                               000004
                                                                         4(SP), PREADD.
     245
                     103362
                                                              BHIS
     246
          001114
     247
                    016667
                               000002
                                                                        2(SP).PREADD
PC.READI
4(SP).PREADD
                                         000000G
                                                              MOV
     248
         001122
001126
                    004767
026667
                               000416
                                                               JSR-
     249
                                         000000G
                               0000041
                                                               ČMP.
     250
251
          001134
                     103372
                                                              BHIS
          001136
                    000207
                                                              RTS.
     252
253
                                                              TEST-01
     255
256
                                                              WRITE ADDRESS INTO ITSELF
     258
259
          001140
                                                    T11::
         001140
001146
                    016667
                               000002: 000000G
                                                              MOV.
                                                                         2(SP).PREADD
     260
                    016767
016701
                               000000G-000000G-1$:
                                                                        PREADD, CKDATA
PREADD, RI
                                                              MOV-
     262-001160
                    016711
                               000000G
                                                              MOV:
                                                                         CKDATA, (R1)
     263
         001164
001172
                    012767
                               000000
                                                              MOV.
                                                                        #0.TD$SW
#2.PREADD
     264
                    062767
026667
                               000002
000004
                                         000000G
                                                              ADD
          001200
                                         000000G
                                                              CMP
                                                                         4(SP), PREADD
                                                                                              ;CHECK · FOR · UPPER · LIMITS
     266
          001206
                     103357
                                                              BHIS
     267
     268
          001210
                    016667
                               000002
                                         000000G
                                                              MOV
                                                                         2(SP), PREADD.
                               000000G · 000000G · 2$:
     269
         001216
                    016767
                                                                         PREADD, CKDATA
                                                              MOV-
                                                                                             :ADDRESS IS PATTERN.
     270
         001224
001230
                    004767
                                                              JSR -
                                                                        PC.READI.
                    026667
                               000004 '000000G
                                                              CMP
                                                                         4(SP) PREADD
                                                                                             ; CHECK · FOR · UPPER · LIMITS
     272.001236
                    103367
                                                                        2$
PC
                                                              BHIS
    273 001240
274
                    000207
                                                              RTS.
     275
    276
277
                                                              TEST-06
MEMORY-CROSS-TALK-TEST
    278
    279
280 001242
                                                    T61::
    281
                                                                                             #SET-LOOP-COUNT:
#SET-TEST-PATTERN-TO-ALL-1'S
#SET-UP-START-ADDRESS:
#LOAD-ADDRESS:
                                                                        #10..R2
#-1.CKDATA
2(SP).PREADD
                                                              MOV.
    282
                                                              MO V
    283
                                                   :10$:
                                                              MOV.
    284
285
                                                              MÖV.
                                                                        PREADD, R1
                                                   :15:
                                                              MOV
                                                                        CKDATA, (R1)
                                                                                                                                               "精神",所谓"行人"。
    286
                                                              MOV.
                                                                         #0.TD$SW
    287
                                                              ADD
                                                                        #4.PREADD
                                                                                             :SKIP-AN ADDRESS-
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 288
                                                        GMP -
                                                                  4(SP), PREADD
                                                                                       :FINISHED
 289
                                                        BHIS
                                                                  1$
                                                                                      :NO. CONTINUE.
:SUB-FROM-LOOP-COUNT.
290
291
                                                        DEC
                                                                  R2.
                                                        BNE
                                                                  10$
293
                                                        CLB
                                                                  CKDATA.
                                                                                      :SET-TEST-PATTERN-TO-ZERO
:RESET-START-ADDRESS-
294
295
                                                                  2(SP),PREADD
#2,PREADD
                                                        MOV
                                                        ADD
                                              ;2$;
                                                        JSR
                                                                  PC.READI.
                                                                                      :READ-AND-COMPARE:
:BUMP-TO NEXT-ADDR (SKIP-ONE)
297
                                                        ADD
                                                                  #2,PREADD
 298
                                                        CMP
                                                                  4(SP), PREADD.
                                                                                      :FINISHED
                                                        BHIS
                                                                  2$
                                                                                      :NO-
 300 001242 000207
                                                        RTS
 301
302
 303
 304
                                                        WRITE/READ ALL ADDRESSES WITH ADDRESS COMPLEMENT
 305
 306
 307
     001244
                                              T71::
     001244
               016602-
                         000002
                                                                  2(SP),R2.
2(SP),PREADD
                                                                                      :SET-R2-=-ADDRESS
:SET-UP-START-ADDRESS-
:GET-ADDRESS-COMPLEMENT-
309 001250
               016667
                         000002
                                   000000G
                                                        MOV-
310 001256
               005102
                                                                  R2.CKDATA
                                                        COM-
 311
     001260
               010267
                         000000G
                                                        MOV
                                                                                      SET TEST PATTERN = ADDRESS COMPLEMENT
312.001264
               016701
                                                                  PREADD, R1
CKDATA, (R1)
                         BRRRRRG
                                                                                      :LOAD ADDRESS
313 001270
314 001274
               016711
                         000000G
                                                        MOV
               012767
                         000000
                                   176376
                                                        MOV
                                                                  #0.TD$SW.
#2.PREADD.
315
     001302
               062767
                         000002
                                   000000G
                                                        ADD
316
     001310
               016702
                         000000G
                                                        MOV.
                                                                  PREADD, R2
                                                                                      :SET.R2. = ADDRESS
:FINISHED:
317 001314
               026667
                         000004 000000G
                                                        CMP.
                                                                  4(SP), PREADD
318
     001322
               103355
                                                        BHIS
                                                                                      ; NO, CONTINUE
320
     001324
               016602
                         000002
                                                                                      :SET.R2.=.ADDRESS
:RESET.START.ADDRESS
:GET.ADDRESS COMPLEMENT.
                                                        MOV.
                                                                  2(SP),R2
321 001330
322-001336
               016667
                         000002
                                   000000G
                                                        MOV.
                                                                  2(SP),PREADD
               005102
                                                                  R2.
R2.CKDATA.
PC.READI.
                                                        COM-
323
     001340
                         000000G
000174
               010267
                                                        MOV-
                                                                                      ;SET TEST PATTERN - ADDR COM
324
     001344
               004767
                                                        JSR
                                                                                      :READ AND COMPARE
:SET R2 = NEXT ADDRESS
325 001350
               016702
                         000000G
                                                        MOV
                                                                  PREADD, R2
326
     001354
               026667
103365
                         000004 000000G
                                                        CMP
                                                                  4(SP),PREADD
                                                                                      :FINISHED
     001362
                                                        BHIS
                                                                  2$
                                                                                      :NO
328 001364
               000207
329
330
331
                                                        TEST-12
332
                                                       ADDRESSING TEST
333
334
335
     001366
336
    001366
               016667
                         000002
                                   000000G
                                                       MOV
                                                                  2(SP),PREADD.
                                                                                     :GET-START-ADDRESS
:LOAD-READ-ADDRESS
337
     001374
               016701
                         000000G
                                              1$:
                                                       MOV.
                                                                 PREADD,R1
338
    001400
               011101
026701
                                                                                      :READ DATA
339
    001402
                         000000G
                                                       CMP
                                                                 CK2.R1
                                                                                      COMPARE AGAINST PATTERN - -
340
    001406
               001402
                                                       BEO
                                                                 .+6
PC.PRPER1
341
    001410
               004767
                         000166
                                                       JSR
342
343 001414
               016701
                         000000G
                                                       MOV
                                                                 PREADD, R1
344 001420
               016711
                                                       M0\, \mathcal{N}
                                                                 CK3.(R1)
                                                                                      : WRITE - PATTERN
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TTEST----MACRO--M1110 27--MAR--80 15:41 PAGE 50-2 Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
    345 001424
                   012767
                            000000
                                      176376
                                                         MOV
                                                                  #0.TD$SW
#2.PREADD
    346 001432
                  062767
026667
                            000002
                                      000000G
                                                        ADD
    347
         001440
                                                                  4(SP),PREADD
                            000004
                                     000000G
                                                         CMP
    348
         001446
                   103352
                                                        BHIS
                                                                  1$
    349
         001450
                                                        RTS
                                                                  PC.
    350
351
         001452
                                               T12IU::
    352-001452
                  016667
                            000004
                                     000000G
                                                        MOV
                                                                  4(SP),PREADD.
                                                                                     :START-ADDRESS-=-UPPER-LIMIT
    353
         001460
                  016701
                            000000G
                                                        MOV.
                                               1$:
                                                                  PREADD,R1
    354
         001464
                  011101
                                                        MOV
                                                                  (R1).R1
    355
         001466
                  012767
                            000000 176376
000000G
                                                                 #0.TD$SW
CK2.R1
                                                        MOV
         001474
                  026701
                                                        CMP
    357
         001500
                  001402
                                                                  .+6
PC.PRPER1
                                                        RED
    358
         001502
                  004767
                            000074
                                                         JSR
    360
         001506
                  016701
                            000000G
                                                        MOV
                                                                  PREADD, RI
         001512
001516
                  016711
012767
    361
                            000000G
                                                                  CK3,(R1)
#0.TD$SW
#2.PREADD
                                                        MOV-
                                                                                     : WRITE - PATTERN
    362
                            000000
                                      176376
                                                        MOV.
         001524
                   162767
                            000002
                                     000000G
                                                        SUB
                                                                                     :BACK-HP
    364 001532
365 001540
                  026667
                            000002
                                     000000G
                                                        CMP
                                                                  2(SP), PREADD.
                  101747
                                                        BLOS
                                                                  1$
    366
         001542
                  000207
                                                                  PC
    367
    368
    369
                                                        READ - AND - COMPARE - ROUTINE
    370
    371
    372 - 001544
                  016701
                            000000G
                                               READI:
                                                        MGV
                                                                 PREADD,R1
    373
        001550
                  011101
                                                        ΜŌΫ
    374
        001552
                  012767
                            000000
                                    176376
                                                        VOM
                                                                  #0.TD$SW
    375
        001560
                  026701
                            000000G
                                                        CMP.
                                                                 CKDATA, R1
    376
        001564
                  001402
004767
                                                        BEQ
                                                                  .+6
         001566
                           000010
                                                                 PC.PRPER1
    378
        001572
                  062767
                           000002
                                     000000G
                                                        ADD
    379
        001600
                  000207
                                                        RTS
    380
    381
    382
                                                        INPUT BUFFER ERROR PREPARATION ROUTINE
    383
384
    385
        001602
        001602
                                                        SAVE
                                                                 R1.R2,R3
         001602
                  010146
                                                                 R1,-(SP)
R2,-(SP)
R3,-(SP)
                                                        MOV-
        001604
                  010246
                                                        MOV
        001606
                  010346
    388
        001610
                  016767
                           000000G-000000G
                                                        MOV:
                                                                 PREADD, ERRADD
        001616
001624
    389
                  012767
                           000001 · 000000G
                                                        MOV.
                                                                 #1.ERRCT
    390
                  016701
                           000000G
                                                        MOV.
                                                                 PREADD, R1
    39 i
        001630
                  011167
                                                                  (Ri),ERW1
                           000000G
                                                        MOV
   392
393
                                                        RETRY
    394
    395
        001634
                  012702
                           000005
                                                        MOV
                                                                 #5.R2.
(R1).R3
                                                                                                                         建高级激制的 图 / 1
    396
        001640
                  011103
                                              1$:
                                                        MOV.
```

CMP

BNE

ERW1,R3

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1

397

001642

001646

026703

001003

имийими

; INDICATE UNPREDICTABLE RESULTS

399 001650 400 001652 401 001654 402 005302 001372 DEC · · · · R2· 1\$ 000403 3\$; 177777 000000G 2\$: 000000G 3\$: ; 012767 004767 403 001656 MOV. JSR: #-1.ERRCT. PC.MEMERR. 404 001664 405 405 406 001670 001670 001672 001674 407 001676 RESTOR : R1.R2.R3 (SP)+.R3 (SP)+.R2 (SP)+.R1 PC 012603 012602 012601 000207 MOV. RTS.

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TTEST MACRO M1110 27-MAR-80 15:41 PAGE 10 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
           409
          410
          411
                                                                                                                           TEST - ROUTINES - FOR - OUTPUT - BUFFER
           412
           413
          414
                                                                                                                           THIS ROUTINE WRITES AND READS THE TEST PATTERN CONTAINED IN "CKDATA"
          415
          416
           417
                    001700
                                                                                                      STUFO::
           418
                    001700
                                         012767
                                                             000000
                                                                                   176376
                                                                                                                           MOV
                                                                                                                                                #0.TD$SW
                                                                                                                                                                                        : RESET - TERM - DETECTOR
                     001706
                                         016667
                                                             000002
                                                                                  000000G
                                                                                                                                               2(SP).PREADD
PC.WRITEO
                                                                                                                           MOV
           420
                    001714
                                         004767
                                                             000420
                                                                                                                           JSR.
                                                                                                                                                                                        :WRITE OUTPUT BUFFER
           421 001720
                                         026667
                                                             000004
                                                                                  000000G
                                                                                                                           CMP
                                                                                                                                                4(SP), PREADD
                                                                                                                                                                                        :CHECK · FOR · UPPER · LIMITS ·
                   001726
           422
                                          103372
                                                                                                                           BHIS
                                                                                                                                                1$
           423
           424
                    001730
                                         016667
                                                             000002
                                                                                  000000G
                                                                                                                                                2(SP).PREADD
                                                                                                                           MOV
           425
                    001736
001742
                                         004767
026667
                                                             000436
000004
                                                                                                                           JSR
                                                                                                                                               PC.READO.
                                                                                                                                                                                        :READ AND COMPARE:
:CHECK FOR UPPER LIMITS
           426
427
                                                                                  000000G
                                                                                                                           CMP
                                                                                                                                                4(SP),PREADD
                     001750
                                                                                                                           BHIS
                                                                                                                                               2$
           428
                    001752
                                         000207
                                                                                                                           RTS.
           429
           430
           431
                                                                                                                           TEST-01
           432
                                                                                                                           WRITE ADDRESS INTO ITSELF
           433
           434
                    001754
001754
001762
           435
                                                                                                      T10::
                                         012767
016667
                                                                                                                                                                                        :RESET-TERM-DETECTOR-
:ADDRESS IS-TEST-PATTERN-
           436
                                                             000000
                                                                                  176376
                                                                                                                           MOV
                                                                                                                                                #0,TD$SW
           437
                                                                                                                                               2(SP),CKDATA
2(SP),PREADD
                                                             000002
                                                                                  000000G
                                                                                                                           MOV
                     001770
                                         016667
                                                             000002
                                                                                  000000G
                                                                                                                           MOV
           439
                     001776
                                         004767
                                                             000336
                                                                                                                                                                                        #WRITE: OUTPUT: BUFFER: #BUMP: TO NEXT: PATTERN: (ADDRESS) #CHECK: FOR: UPPER: LIMITS:
                                                                                                                           JSR
                                                                                                                                               PC.WRITEO.
           440
                    002002
                                         062767
                                                             000002
                                                                                  000000G
                                                                                                                                               #2.CKDATA
                                                                                                                           ADD
           441
                     002010
                                         826667
                                                             000004
                                                                                 000000G
                                                                                                                                                4(SP).PREADD
                                                                                                                           CMP
                     002016
           442
                                          103367
                                                                                                                           BHIS
                                                                                                                                                1$
           443
                                                                                                                                               2(SP),CKDATA
2(SP),PREADD
           444
                    002020
                                         016667
                                                             000002
                                                                                  000000G
                                                                                                                           MOV
                                                                                                                                                                                        :SET-TEST-PATTERN-=-ADDRESS
           445
                                         016667
004767
                     002026
                                                             000002
                                                                                  000000G
                                                                                                                           MOV
                     002034
           446
                                                             000340
                                                                                                      2$:
                                                                                                                           JSR
                                                                                                                                               PC, READO.
                                                                                                                                                                                         :READ AND COMPARE
           447
                     002040
                                          062767
                                                             000002
                                                                                  000000G
                                                                                                                           ADD
                                                                                                                                                                                        CHANGE ADDRESS (PATTERN)
CHECK FOR UPPER LIMITS
                                                                                                                                               #2,CKDATA
           448
                    002046
                                         026667
                                                             000004
                                                                                 000000G
                                                                                                                           CMP
                                                                                                                                               4(SP).PREADD
           449
                    002054
                                          103367
                                                                                                                           BHIS
                                                                                                                                               2$
           450
                                         000207
                    002056
                                                                                                                                               PC
                                                                                                                           RTS
          451
           452
                                                                                                                          TEST-06
MEMORY-CROSS-TALK-TEST
           453
           454
          455
           456
                    002060
                                                                                                       T60::
                                                                                   458
           459
           460
          461
462
          463
                                                                                                                                                                                                                                                              THE RESERVE OF THE PARTY OF THE
          464
          465
```

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0 M1110 27-MAR-80 15:41 PAGE: 10-1
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466
                                                      DEC----
                                                                                    :SUB · FROM · LOOP · GOUNT ·
                                                      BNE .
                                                                10$
468
469
                                                      CLR
                                                                CKDATA
                                                                                    :SET-TEST-PATTERN-TO-ZERO-
470
                                                                2(SP) PREADD
                                                                                   :RESET START ADDRESS:
:START AT NEXT ADDRESS
                                                      MOV
471
                                                      ADD
                                                                #2,PREADD
472
                                            :2$:
                                                      JSR
                                                                PC.READO
                                                                                    :READ · AND · COMPARE
473
                                                      ADD
                                                                #2,PREADD
                                                                                    :BUMP · ADDR · (SKIP · ONE)
474
                                                      CMP
                                                                4(SP), PREADD.
                                                                                    :FINISHED
                                                      BHIS
                                                                2$
                                                                                   :N0
476
    002060 000207
                                                      RTS
477
479
                                                      TEST-07
488
                                                      WRITE/READ ALL ADDRESSES WITH ADDRESS COMPLEMENT
481
482
483
    002062
484
     002062
              012767
                        ававава
                                 1176376
                                                      MOV
                                                                #0.TD$SW
                                                                                    :RESET-TERM-DETECTOR
     002070
               016602
                                                                                   SET R2 = ADDRESS

SET VP START ADDRESS

GET ADDRESS COMPLEMENT

SET TEST PATTERN = ADDRESS COMPLEMENT
                        000002
                                                      MOV
                                                                2(SP).R2
486
     002074
                        000002
                                  000000G
                                                      MOV
                                                                2(SP),PREADD
487
     002102
               005102
                                            1$:
                                                      COM-
    002104
488
               010267
                        000000G
                                                      MOV
                                                                R2,CKDATA
489
    002110
               004767
                        000224
                                                      JSR.
                                                               PC.WRITEN
                                                                                   :WRITE OUTPUT BUFFER
                        000000G
490 002114
               016702
                                                      MOV
                                                               PREADD, R2
                                                                                   ;SET.R2. = NEXT ADDRESS
491 002120
              826667
                        000004
                                  000000G
                                                      CMP
                                                                4(SP).PREADD
                                                                                   FINISHED.
492 002126
               103365
                                                      BHIS
                                                                1$
                                                                                   :NO, CONTINUE
493
494
    002130
               016602
                        000002
                                                                                   :SET R2.=.ADDRESS
:RESET.START.ADDRESS:
:GET ADDRESS COMPLEMENT
:SET TEST PATTERN =.ADDR.COM
                                                      MOM
                                                                2(SP),R2
495
    002134
               016667
                        000002
                                  000000G
                                                      MOM-
                                                                2(SP).PREADD
496
    002142
              005102
                                            2$:
                                                      COM
                                                                R2 ·
     002144
                                                               R2.CKDATA
497
               010267
                        000000G
                                                      MOV
498
    002150
               004767
                                                                                   READ AND COMPARE
SET R2 = NEXT ADDRESS
                        000224
                                                      JSR
                                                                PC, READO.
499
    002154
               016702
                        000000G
                                                      MOV
                                                                PREADD, R2
500
    002160
              826662
                        000004
                                  аяваявь
                                                      CMP
                                                                4(SP).PREADD
                                                                                   :FINICHED
50 i
    002166
               103365
                                                      BHIS
                                                                2$
                                                                                   :N0
                                                                ΡĊ
502.002170
               000207
                                                      ŘTS
593
504
505
                                                      TEST-12-
506
                                                      ADDRESSING TEST
592
508
509
    002172
                                            T120D::
510
    002172
               012767
                        000000
                                  176376
                                                      MOV
                                                                #0.TD$SW
                                                                                   : RESET · TERM · DETECTOR
511 002200
512 002206
              016667
                        000002
                                  000000G
                                                      MOV
                                                               2(SP), PREADD
                                                                                   GET START ADDRESS
              016767
                        000000G · 000000G · 1$:
                                                      MOV-
                                                                CK2, CKDATA
                                                                                   GET READ PATTERN
513
    002214
               004767
                                                               PC,READO:
#2,PREADD
                                                      JSR
                                                                                   :READ AND COMPARE
514 002220
               162767
                        000002
                                  000000G
                                                      SUB
                                                                                   :WRITE AT SAME ADDRESS
:GET WRITE PATTERN
:WRITE OUTPUT BUFFER
515 002226
              016767
                        000000G-000000G
                                                      MOV
                                                                CK3,CKDATA
516
    002234
              884767
                        000100
                                                      ISP
                                                               PC.WRITEO
517
    002240
              026667
                        000004
                                  000000G
                                                      CMP
                                                               4(SP),PREADD
518 002246
519 002250
              103357
                                                      BHIS
                                                                1$
              000207
                                                      RTS.
                                                               PC
520
    002252
                                            T120U::
522-002252-012767
                                  176376
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TTEST-

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TTEST- - MACRO - M1110 27-MAR-80 15:41 PAGE - 10-2
                                        Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
     523 002260
                   016667
                             000004
                                       000000G
                                                                     4(SP),PREADD
                                                           MOV
                                                                                        :START ADDRESS -- UPPER LIMIT
:READ PATTERN
     524 002266
                             000000G · 000000G · 1$:
                                                                     CK2, CKDATA
                    016767
                                                           MOM
                                                                                        READ AND COMPARE.

BACK UP TO SAME ADDRESS
     525
         882274
                    004767
                             000100
                                                           JSR
                                                                     PC, READO.
     526
         002300
                    162767
                                       ABBBBBBB
                             000002
                                                           SUB
                                                                     #2,PREADD
          002306
                    016767
                             000000G-000000G-
                                                                                        :WRITE PATTERN:
:WRITE OUTPUT BUFFER:
:BACK-UP 1 ADDRESS
                                                           MOV
                                                                     CK3,CKDATA
     528-002314
                    004767
                             000020
                                                           JSR
                                                                     PC, WRITEO.
     529
         882328
                    162767
                             000004
000002
                                       000000G
                                                           SUB
                                                                     #4,PREADD
     530
         002326
                    026667
                                                           CMP
                                                                     2(SP),PREADD
     531
         002334
                    003754
                                                           BLE
                                                                     1$
     532 - 002336
                    000207
     533
     534
     535
     536
                                                           WRITE-OUTPUT BUFFER-
     537
     539
          002346
                    012767
                             000032
                                       176362
                                                 WRITEO:
                                                           MOV
                                                                     #T$OBWA,TD$TAW
                                                                                        ;SET-UP-MEMORY ADDRESS REG
                   016767
012767
     549
          002346
                             000000G·176364
                                                                     PREADD, TD$TDW
                                                                                        SET OF MARKSFER CODE
          002354
     541
                             000036 176362
                                                           MOV
                                                                     #T$OB.TD$TAW
     542
         002362
                    016767
                             000000G · 176364
                                                           MOV
                                                                     CKDATA, TD$TDW
                                                                                         :WRITE OUTPUT BUFFER A
     543
          002370
                    062767
                             000002 000000G
                                                           ADD
                                                                     #2,PREADD.
     544 002376
                    000207
                                                           RTS
     545
     546
     547
                                                           READ - AND - COMPARE
     548
     549
     550
          002400
                                                 READO:
     551
          002400
                    012767
                             000034 176362
                                                                     #T$OBRA,TD$TAW
PREADD,TD$TDW
                                                           MOV
                                                                                        ;SET-UP-READ ADDRESS-
;ADDRESS TO-READ-
;SELECT-OUTPUT-BUFFER-
     552
         002406
                    016767
                             000000G·176364
                                                           MOV.
     553
                             000036
176374
         002414
                    B12767
                                      176372
                                                           MOV:
                                                                     #T$OB, TD$TAR.
         002422
                   016701
026701
                                                           MOV
                                                                     TD$TDR.R1
                                                                                        ;READ OUTPUT BUFFER
     555
          002420
                             000000G
                                                           CMP
                                                                     CKDATA, R1
     556
557
         002432
002434
                    001402
                                                                      . +6
                                                           BEQ
                                                                                        ;OK, CONTINUE.
                    004767
                             000010
                                                                     PC.PRPERO
                                                           TOR
          002440
                    062767
                             000002
                                       1000000G
                                                           ADD
                                                                     #2,PREADD
                                                                                        :ADVANCE ADDRESS
     559
         002446
                    000207
                                                           RTS
     560
     561
                                                           PREPARE · ERROR · LIST ·
     563
     564
          002450
                                                 PRPERO:
         002450
002450
                                                           SAVE
                                                                     R1.R2.R3
                    010146
                                                                     R1.-(SP)
R2.-(SP)
                                                           MOV-
          002452
                   010246
                                                           MOM
                                                           MOV
     567
     568
         002456
                    016767
                             000000G - 000000G -
                                                           MOV
                                                                     PREADD, ERRADD
     569
         002464
                   012767
                                                                                        PRINT ONE WORD
SET UP READ ADDRESS
ADDRESS TO READ
SELECT OUTPUT BUFFER
                             000001
                                       000000G
                                                           MOV
                                                                     #1.ERRCT
     570
         002472
                    012767
                                       176362
                                                                     #T$OBRA, TD$TAW
PREADD, TD$TDW
                             000034
                                                           MOV
    571 002500
572 002506
                   016767
                             000000G-176364
                                                           MOV
                             000036
176374
                                                           M0V -
                   012767
                                       176372
                                                                     #T$OB,TD$TAR
     573 002514
                   016767
                                       авававас
                                                                     TD$TDR,ERW1
                                                                                         READ OUTPUT BUFFER
    574
575
576
                                                           RETRY-
```

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TTEST- . . P RO-M1110 27-MAR-80 15:41 PAGE-10-3 Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3 ;NUMBER.OF.RETRIES ;SET.UP.READ ADDRESS. ;ADDRESS TO.READ. ;SELECT.OUTPUT.BUFFER. ;READ.OUTPUT.BUFFER. 002522 012702 000005 MOV. #5,R2 #T\$OBRA,TD\$TAW PREADD,TD\$TDW #T\$OB,TD\$TAR 578 002526 012767 000034 176362 15: MOV: 579 002534 580 002542 000000G-176364 000036 -176372 MOV. 016767 012767 016703 581 002550 176374 MOV TD\$TDR,R3 581 002550 582 002554 583 002556 584 002560 585 002562 R3.R1 2\$ R2. 020301 001003 CMP BHE :NOT-THE SAME-ERROR 005302 001361 BNE 1\$ 586 002564 000403 BR 3\$:REPORT ERROR 587 588 002566 589 002574 012767 177777 000000G 2\$: MOV-#-1.ERRCT : INDICATE UNPREDICTABLE RESULTS. 004767 000000G 3\$: JSR. PC.MEMERR 590 591 R1.R2.R3 (SP)+.R3 (SP)+.R2 002600 RESTOR-002600 012603 MOV. 002602 012602 012601 MOV. (SP)+.R1 002604 592 - 002606 RTS PC.

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TTEST- - MACRO - M1110 27-MAR-80 15:41 PAGE - 11
                                     Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
    594
595
    596
                                                       TEST-ROUTINES-FOR-BYTE TRANSLATOR
    597
    598
    599
                                                       THIS ROUTINE WRITES AND READS THE TEST PATTERN CONTAINED IN "CKDATA"
    600
    601
    602-002610
                                              STUFT::
    603
        002610
002616
                  B12767
                           равава
                                    176376
                                                       MOV.
                                                                #0.TD$SW
                                                                                   : RESET - TERM - DETECTOR -
    504
                  816667
                           000002
                                                                2(SP),PREADD
                                    000000G
                                                       MOV-
         002624
                  004767
                           000414
                                                                PC, WRITET
                                              1$:
                                                       JSR.
                                                                                   :WRITE · BYTE · TRANS
    606
         002630
                  026667
                           000004
                                    000000G
                                                       CMP
                                                                4(SP),PREADD
                                                                                   607
         002636
                  103372
    608
    609
         002640
                  016667
                           000002
                                    000000G
                                                       MOV
                                                                2(SP),PREADD
    610
        002646
                  004767
                           000432
                                                       JSR
                                                                PC, READT
                                                                                   :READ AND COMPARE:
:CHECK:FOR:UPPER:世刊中下S:网络阿拉拉
    611 002652
612 002660
        002652
                  026667
                           000004
                                    000000G
                                                       CMP
                                                                4(SP), PREADD
                  103372
                                                       BHIS
                                                                2$
    613
         002662
                  000207
                                                       RTS.
                                                                PC
    614
    615
    616
                                                       TEST:01
    617
                                                       WRITE ADDRESS INTO ITSELF
    618
619
    620
        002664
                                              T1T::
         002664
                  012767
                           000000
                                    176376
                                                       MOV
                                                                #0.TD$SW
                                                                                   :RESET-TERM-DETECTOR
        002672
002700
002706
    622
                  016667
                           000002
                                    000000G
                                                       MOV
                                                                2(SP),CKDATA
                                                                                   :ADDRESS IS TEST PATTERN
    623
                  016667
                           000002
                                    000000G
                                                       MOV:
                                                                2(SP),PREADD
    624
                  004767
                           000332
                                                                PC.WRITET
CKDATA
                                                       JSR.
                                                                                   ; WRITE · BYTE · TRANS
        002712
002716
    625
                  005267
                           000000G
                                                       INC
    626
627
                  026667
                           000004
                                    000000G
                                                       CMP
                                                                4(SP),PREADD
                                                                                  :CHECK - FOR - UPPER - LIMITS -
         002724
                  103370
                                                       BHIS
    628
                                                                2(SP).CKDATA.
2(SP).PREADD.
    629
        002726
                  016667
                           000002
                                    000000G
                                                       Мо∨
                                                                                  :SET-TEST-PATTERN- = - ADDRESS
        002734
002742
    630
                  016667
                           000002
                                    000000G
                                                       MOV
    631
                  004767
                           000336
                                             2$;
                                                       JSR
                                                                PC.READT
                                                                                  READ AND COMPARE
    632
        002746
                  005267
                           000000G
                                                       INC
                                                                CKDATA
    633
        002752
                  026667
                           000004 · 000000G
                                                       CMP
                                                                4(SP), PREADD
                                                                                  :CHECK · FOR · UPPER · LIMITS
    634 002760
                  i03370
                                                       BHIS
                                                                2$
    635
        002762
                  000207
                                                                ΡĊ
    636
    637
    638
                                                       TEST 06
    639
                                                       MEMORY · CROSS-TALK · TEST
    640
    641
    642 - 002764
                                              T6T::
    643
                                                       MOV
                                                                                  :RESET - TERM - DETECTOR -
                                                                #0.TD$SW
    644
                                                                #10..R2
#-1.CKDATA
                                                       MOV:
                                                                                   :SET-LOOP-COUNT
    645
                                                                                   SET TEST PATTERN TO ALL 1'S
                                                       MOV
    646
647
                                                                2(SP) PREADD
                                              :10$:
                                                       MOV
                                                                                  SET UP START ADDRESS
URITE CKBATO PROPERTY SKIP AND ADDRESS
                                              :15:
                                                       JSR
                                                                PC, WRITET
    648
                                                       INC
                                                                PREADD
    649
                                                       CMP
                                                                4(SP).PREADD
                                                                                  :FINISHED
    650
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80.Mł110 27+MAR-80 15:41 PAGE:11-1
TTEST- . . M
                                         Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3
    65 t
                                                                                          :SUB · FROM · LOOP · COUNT ·
    652
653
                                                            BNE.
                                                                      10$
    654
                                                            CLR
                                                                      CKDATA:
                                                                                          :SET-TEST-PATTERN-TO-ZERO
    655
                                                            MOV
                                                                      2(SP),PREADD
                                                                                          :RESET-START-ADDRESS
:START-AT-FIRST-ADDR
     656
                                                            INC
                                                                      PREADD.
                                                                                          READ AND COMPARE
BUMP ADDR (SKIP)
     657
                                                  :2$:
                                                            JSR
                                                                      PC, READT.
    658
                                                            THE
                                                                      PREADD.
     659
                                                            CMP
                                                                      4(SP), PREADD
                                                                                          ; FINISHED.
                                                            BHIS
                                                                      2$
                                                                                          : NO
     661
         002764 000207
                                                                      PC
     662
     663
     664
                                                            TEST-07
     665
                                                            WRITE/READ ALL ADDRESSES WITH ADDRESS COMPLEMENT
     666
     667
     668
         002766
                                                                                          :RESET TERM DETECTOR :
:SET R2 = ADDRESS
:SET UP START ADDRESS :
:GET ADDRESS COMPLEMENT
     669
          002766
                    012767
                              000000
                                        176376
                                                            MOV
                                                                      #0.TD$SW
          002774
                    016602
                              000002
                                                            MOV
                                                                      2(SP).R2
     671
          003000
                    016667
                              000002
                                        000000G
                                                            MOV
                                                                      2(SP), PREADD
     672
         - 003006
                    005102
                                                  15:
                                                            COM
                                                                      R2.
     673
                                                                                          SET TEST PATTERN = ADDR COM
WRITE CKDATA TO BYTE TRANS
SET R2 = NEXT ADDRESS
          003010
                    010267
                              000000G
                                                                      R2,CKDATA
                                                            MOV
     674
          003014
                    004767
                              000224
                                                            JSR
                                                                      PC. WRITET
     675
                    016702
026667
         003020
                              000000G
                                                            MOV
                                                                      PREADD, R2
          003024
     676
                              000004 000000G
                                                            CMP
                                                                      4(SP),PREADD
                                                                                          :FIHISHED
          003032
                    103365
                                                            BHIS
                                                                                          :NO, CONTINUE
                                                                      15
     678
679
          003034
                              000002
                    016602
                                                            MOV
                                                                      2(SP),R2
                                                                                          ;SET-R2-=-ADDRESS
                    016667
          003040
                              000002
                                        000000G
                                                                                          RESET START ADDRESS:
GET ADDRESS COMPLEMENT
                                                                      2(SP),PREADD
                                                            MOV
     681
          003046
                    005102
                                                            COM
                                                                      R2
     682
         003050
                    010267
                              000000G
                                                            MOM
                                                                      R2,CKDATA
                                                                                          ;SET.TEST.PATTERN. = . ADDR.COM
     683
         003054
                    004767
                              000224
                                                            JSR
                                                                      PC,READT
PREADD,R2
                                                                                          :READ AND COMPARE
         003060
                              000000G
                    016702
                                                            MOV
                                                                                          :SET-R2 = NEXT ADDRESS
:FINISHED
     685
         003064
                    026667
                              000004
                                        000000G
                                                            CMP
                                                                      4(SP), PREADD
     686
          003072
                    183365
                                                            BHIS
     687
          003074
                    000207
                                                            RTS
                                                                      PC
     688
     689
                                                            TEST:12:
ADDRESSING:TEST
     690
     691
     693
     694
          003076
          003076
     695
                    012767
                              000000
                                        176376
                                                            MOV
                                                                      #0,TD$SW
                                                                                          RESET TERM DETECTOR
                                                                      2(SP).PREADD
CK2.CKDATA
          003104
                              000002
                    016667
                                        000000G:
                                                            MOV
                                                                                          GET START ADDRESS
     697
          003112
                    016767
                              000000G · 000000G · 1$:
     698
          003120
                    004767
                              000160
                                                            JSR
                                                                      PC, READT.
                                                                                          :READ · AND · COMPARE
                                                                                                                                 -γ<del>4</del>γ.
     699
          003124
                    162767
                              000001
                                        BRABBAG
                                                                                          : WRITE - AT - SAME - ADDRESS
                                                            SHB
                                                                      #1.PREADD
     700
          003132
                              000000G · 000000G
                    016767
                                                            MOV
                                                                      CK3,CKDATA
                                                                                          :GET-WRITE-PATTERN
     701 003140
702:003144
                    004767
                              000100
                                                             JSR
                                                                      PC. WRITET
                    926667
                                        000000G
                                                            CMP
                              000004
                                                                      4(SP),PREADD.
     703
          003152
                    103357
                                                            BHIS
                                                                      1$
     704
         003154
                    000207
                                                                      ΡĊ
                                                            RTS
     705
          003156
     706
                                                  T12TU::
          003156
                    012767
                              000000
                                        176376
                                                            MOV.
                                         176376 MOV #0.TD$SW ;RESET TERM DETECTOR 
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TTEST----MACRO-M1110 27-MAR-80 15:41 PAGE-11-2-
Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
                                            000000G
                                                                              4(SP),PREADD
     708 003164
                      016667
                                 000004
                                                                                                     :START-ADDRESS-=-UPPER-LIMIT
     709
          003172
                                 000000G \cdot 000000G \cdot 1\$;
                                                                   MOV.
                                                                              CK2,CKDATA
                                                                                                     ; READ · PATTERN ·
                                                                                                    READ AND COMPARE BACK UP TO SAME ADDRESS
     710 003200
711 003204
                      004767
                                 000100
                                                                   JSR.
                                                                              PC, READT.
                                             ARRAGAC
                                                                              #1.PREADD
                      162767
                                                                   SHB
                                 000001
          003212
                      016767
                                 000000G · 000000G
                                                                   MOV
                                                                              CK3,CKDATA
                                                                                                    : WRITE . PATTERN.
     713 003220
                      004767
                                 000020
                                                                   JSR
                                                                              PC. WRITET
     714 003224
715 003232
                      162767
026667
                                 000002
000002
                                             000000G
                                                                   SHB
                                                                              #2,PREADD
                                                                                                    :BACK-UP 1
                                            000000G
                                                                   CMP
                                                                              2(SP), PREADD
     715 003232
716 003240
717 003242
718
719
720
                      003754
                                                                   BLE
                      000207
                                                                              PC.
     72 i
72 2
                                                                   WRITE · BYTE · TRANSLATOR
      724
           003244
                                                        WRITET:
           003244
003252
                      012767
                                 000030 176362
000000G·176364
                                 00003A
      725
                                                                   MOV
                                                                              #T$BTAR,TD$TAW
                                                                                                    :SELECT-BYTE-TRANS REG
                      016767
      726
                                                                                                    #MOVE - ADDR - TO - TRANSFER - REG-
#SELECT - BYTE - TRANS MEMORY -
#WRITE - BYTE - TRANS -
#BUMP - ADDRESS -
                                                                   MOV
                                                                              PREADD, TD$TDW-
#T$BT, TD$TAW-
           003260
                      012767
                                  000020
                                            176362
                                                                   MOV
     728 · 003266
729 · 003274
                      016767
                                 000000G-176364
                                                                   MOV
                                                                              CKDATA, TD$TDW
                      062767
                                 000001 000000G
                                                                   ADD:
                                                                              #1.PREADD
                      000207
                                                                   RTS
      731
732
      733
                                                                   READ BYTE TRANSLATOR
      734
      735
736
           003304
                                                        READT:
                      012767
016767
                                                                                                    :SELECT · BYTE · TRANS REG
:MOVE · ADDR · TO · TRANSFER · REG
:SELECT · BYTE · TRANS MEMORY ·
:READ · BYTE · TRANS ·
:CHECK · AGAINST · PATTERN ·
      737
           003304
                                 000030
                                            176362
                                                                   MOV
                                                                              #T$BTAR,TD$TAW
           003312
                                 000000G-176364
                                                                              PREADD, TD$TDW
#T$BT, TD$TAR
TD$TDR,R1
                                                                   MOV
                                 000020
176374
      739
           003320
                      012767
                                            176372
                                                                   MOV
      749
           003326
                      016701
                                                                   MOV
      741
           003332
                      026701
                                 000000G
                                                                   CMP
                                                                              CKDATA,R1
      742.003336
                      991492
                                                                              .+6
PC.PRPERT
                                                                   BEO
                                                                                                    ;OK, CONTINUE
                      004767
      743
           003340
                                 000010
                                                                                                    :PRINT-ERROR-MESSAGE
                                                                   JSR
      744
           003344
                      062767
                                 000001
                                            999999G
                                                                   ADD.
                                                                              #1.PREADD
                                                                                                    :BUMP - ADDRESS
      745
           003352
                      000207
      746
      747
      748
                                                                   PREPARE · ERROR · LIST ·
      749
      759
           003354
003354
003354
      751
                                                        PRPERT:
                                                                   SAVE
                                                                              R1.R2.R3
                                                                              R1.-(SP)
R2.-(SP)
                      010146
                                                                   MOV.
           003356
                      010246
                                                                   MOV
           003360
                      010346
                                                                              R3.-(SP)
     753
     754 003362
755 003370
                      016767
012767
                                 000000G-000000G
                                                                   MOV
                                                                              PREADD, ERRADD
                                 000001
                                            000000G
                                                                   MOV.
                                                                              #1,ERRCT
                                                                                                     ; PRINT ONE WORD
                                                                              #1,ERRCT
#T$BTAR,TD$TAW
PREADD,TD$TDW
#T$BT,TD$TAR
TD$TDR,ERW1
           003376
      756
                      012767
                                             176362
                                 000030
                                                                                                    :SET UP READ ADDRESS
:ADDRESS TO READ
     757 003404
758 003412
                      016767
                                 000000G-176364
                                                                   MOV
                                                                                                    :SELECT FOR BUFFER
                      012767
                                 000020
                                            .176372
                                                                   MOV
     759 003420
760
761
                      016767
                                 176374
                                                                   MOV
                                            000000G
                                             Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
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THE PROPERTY OF

R0 M1110 27-MAR-80 15:41 PAGE 11=3 Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3 763 003426 012702 000005 :NUMBER-OF-RETRIES :SET-UP-READ ADDRESS-:ADDRESS TO-READ-:SELECT-BYTE-TRANSLATOR-MOV #5.R2 764 003432 012767 000030 176362 15: #T\$BTAR, TD\$TAW MOV: 765 003440 766 003446 016767 000000G-176364 PREADD, TD\$TDW #T\$BT, TD\$TAR MOV 766 003446 767 003454 768 003460 769 003462 770 003466 771 003466 772 003470 773 003470 774 003472 775 003500 776 003500 012767 000020 MOV 016703 176374 MOV TD\$TDR,R3 :READ OUTPUT BUFFER 020301 R3.R1 CMP 001003 BHE DEC BHE 2\$ R2. ; NOT . THE SAME . ERROR 005302 001361 3\$:REPORT ERROR 012767 000000G 2\$: MOV-#-1,ERRCT : INDICATE UNPREDICTABLE RESULTS 004767 000000G PC. MEMERR 3\$: JSR 003504 003504 RESTOR R1,R2,R3 (SP)+,R3 (SP)+,R2 012603 MOV 003506 003510 012602 MOV. 012601 (SP)+,R1 PC: 778 779 003512 000207 RTS. 780 000001 .END

```
TTEST: MACRO M1110 27-MAR-80 15:41 PAGE 11-4
SYMBOL TABLE Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
 BITVAL = . 000000
                                                                 DG.SDF=-002000
DG.TDF=-004000
                                                                                                                                  READX.
                                                                                                                                                       000636R
                                                                                                                                                                                       005 TD$RST= 176366
                                                                                                                                                                                                                                                                 T$SEG2= . 000001
 BIT0 = 000001
BIT1 = 000002
                                                                                                                                  READ1
                                                                                                                                                        000646R
                                                                                                                                                                                       005
                                                                                                                                                                                                 TD$SW- = . 176376
                                                                                                                                                                                                                                                                 T$SEG3= 000002
                                                                  ERRADD = · ****** GX
                                                                                                                                  RR1
                                                                                                                                                       000742R
                                                                                                                                                                                                 TD$TAR= 176372
 BIT10 = 002000
                                                                                                                                                                                                                                                                 T$SO = 000001
                                                                 ERRCT -- ******* GX
                                                                                                                                  SR.ARE.
                                                                                                                                                       000114
                                                                                                                                                                                       002 · TD$TAW= · 176362
                                                                                                                                                                                                                                                                 T$UBUS= 100000
 BIT11 = 004000
                                                                                = · ********** GX ·
                                                                 ERW1
                                                                                                                                  SR.ARS
                                                                                                                                                       000106
                                                                                                                                                                                       002 · TD$TDR= · 176374
                                                                                                                                                                                                                                                                 T$1CLK= 000400
 BIT12 - 010000
                                                                 ERW2
                                                                                 = - жжжжжжж БХ
                                                                                                                                  SR.DAY
                                                                                                                                                       000010
                                                                                                                                                                                                 TD$TDW= 176364
 BIT13 = 020000
                                                                                                                                                                                                                                                                 T$8BEN= 000020
                                                                                = ********* GX
                                                                 ERW3
                                                                                                                                                                                      002·T$AD = 000020
002·T$BA = 000002
                                                                                                                                                       000014
                = 040000
                                                                                                                                                                                                                                                                 T1F -
                                                                                                                                                                                                                                                                                                                       005
                                                                                                                                                                                                                                                                                      000072RG
                                                                 FD.FID
                                                                                      000000
                                                                                                                       003 SR.ECB
                                                                                                                                                       999947
                                                                                                                                                                                                                                                                 Til.
                                                                                                                                                                                                                                                                                      001140RG
001754RG
 BIT15 = 100000
                                                                 FD.FNB
                                                                                                                                                                                                                                                                                                                      005
                                                                                       000006
                                                                                                                       003 SR.ECH
                                                                                                                                                                                       002 T$BD - - 000010
 BIT2 - 000004
                                                                                                                      003 SR.ECL
003 SR.FIB
                                                                                                                                                                                                                                                                 T10
                                                                 FD.FVR
                                                                                       000004
                                                                                                                                                                                                                                                                                                                      005
                                                                                                                                                       000050
                                                                                                                                                                                       002 · T$BSO · = · 100000
                 = 000010
                                                                                                                                                                                                                                                                 TIT
                                                                                                                                                                                                                                                                                       002664RG
                                                                                                                                                                                                                                                                                                                       005
                                                                 FD.LEN
                                                                                       000010
                                                                                                                                                                                      002·T$BT· = 000020
                                                                                                                                                       000012
                                                                                                                                                                                                                                                                 TizeD
 BIT4
                 --000020
                                                                                                                                                                                                                                                                                      000340RG
                                                                                                                                                                                                                                                                                                                      005
                                                                 FN:ACK
                                                                                                                      004 SR.GRE
004 SR.GRS
004 SR.LEN
                                                                                       000016
                                                                                                                                                       000100
                                                                                                                                                                                       002 · T$BTAR = · 000030
                 = 000020
                                                                                                                                                                                                                                                                                       000426RG
 BITS
                                                                FN.FSA
FN.FSB
                                                                                       000000
                                                                                                                                                                                                                                                                                                                      005
                                                                                                                                                       000072
                                                                                                                                                                                       002 · T$BTD · = · 002000
                 = 000100
                                                                                                                                                                                                                                                                 T121D
                                                                                                                                                                                                                                                                                      001366RG
                                                                                       000002
                                                                                                                                                       000122
                                                                                                                                                                                      002 T$CD = 000100
002 T$CLK = 002000
                                                                                                                                                                                                                                                                 Tiziú
 BIT7
                 = 000200
                                                                                                                                                                                                                                                                                      001452RG
                                                                                                                                                                                                                                                                                                                      005
                                                                 FN.FSC
                                                                                                                      004 SR.LIN
004 SR.LIP
004 SR.MON
                                                                                       000004
                                                                                                                                                       000066
                                                                                                                                                                                                                                                                 T120D
                                                                                                                                                                                                                                                                                      002172RG
                 = 000400
                                                                                                                                                                                                                                                                                                                      005
 BITA
                                                                                       000020
                                                                                                                                                       999962
                                                                                                                                                                                       002 · T$DISK = · 000200
                 = 001000
                                                                                                                                                                                                                                                                 T120U
T12TD
                                                                                                                                                                                                                                                                                      002252RG
 BIT9
                                                                                                                                                                                                                                                                                                                      005
                                                                 FH: MHR
                                                                                      000010
                                                                                                                                                       000006
                                                                                                                                                                                      002 · T$DRD · = · 000004
                 = . 000000
                                                                                                                                                                                                                                                                                      993926PC
                                                                                                                                                                                                                                                                                                                      005
                                                                 EN. NMB
                                                                                      000022
                                                                                                                       004 SR.NDC
                                                                                                                                                       000042
                                                                                                                                                                                      002 · T$EMEM= · 010000
                                                                                                                                                                                                                                                                 T12TU
 BYTE1 = 000001
                                                                                                                                                                                                                                                                                      803456RB
                                                                                                                                                                                                                                                                                                                      йй5
                                                                 FN:QLS
                                                                                      000006
                                                                                                                      004 SR.NDS
                                                                                                                                                       000036
                                                                                                                                                                                      002 · T$FSAA = · 000000
                                                                                                                                                                                                                                                                T6F.
 BYTE2 - 0000002
                                                                                                                                                                                                                                                                                                                      005
                                                                 FH:RDC
                                                                                      000014
                                                                                                                      004 SR.HIH
                                                                                                                                                       000030
                                                                                                                                                                                       002 · T$FSAB = · 000004
                                                                                                                                                                                                                                                                                      001242RG
 BYTE3 = 000003
                                                                 FH.UPD
                                                                                                                      004 SR.HIP
                                                                                      000012
                                                                                                                                                                                      002 · T$FSAC = · 000014
                                                                                                                                                      000022
                                                                                                                                                                                                                                                                 T60 -
                                                                                                                                                                                                                                                                                      002060RG
 8YTE4 = 000004
                                                                                                                                                                                                                                                                                                                      005
                                                                 MEMERR = · ****** GX
                                                                                                                                 SR.SDB
                                                                                                                                                      000032
                                                                                                                                                                                      002 · T$FSB2= · 000010
  3YTE5 = 0000005
                                                                                                                                                                                                                                                                 T6 T
                                                                                                                                                                                                                                                                                      002764RG
                                                                                                                                                                                                                                                                                                                      005
                                                                 MS.DGH= 010000
                                                                                                                                  SR.SRC
                                                                                                                                                                                     002 · T$IB · = · 000026
002 · T$IBAR = · 000024
                                                                                                                                                      000002
                                                                                                                                                                                                                                                                 T7F
                                                                                                                                                                                                                                                                                      000212RG
 GYTE6
                                                                                                                                                                                                                                                                                                                      คีค5
                                                                                - 0000012
                                                                                                                                 SR.SUN
                                                                                                                                                                                                                                                                                      001244RG
                                                                                                                                                                                                                                                                                                                      005
 BYTE7 = 0000007
                                                                 N.BFAC = 000004
                                                                                                                                 SR.TWS
                                                                                                                                                      000056
                                                                                                                                                                                      002 · T$IBE · = · 020000
 BYTE8 - - 000010
                                                                                                                                                                                                                                                                 T70,
                                                                                                                                                                                                                                                                                      002062RG
                                                                                                                                                                                                                                                                                                                      005
                                                                 N.BHGH= 000006
                                                                                                                                 SR.WSL
                                                                                                                                                      000052
                                                                                                                                                                                      002 · T$IBF · = · 040000
                                                                                                                                                                                                                                                                                      ЙИ2766RG
 BYTE9 = 000011
                                                                                                                                                                                                                                                                                                                      005
                                                                N.BTCH= 000004
                                                                                                                                 SR.YR
                                                                                                                                                      000004
                                                                                                                                                                                      992
                                                                                                                                                                                                ·T$ICD = 000040
                                                                                                                                                                                                                                                                WORD0 = 000000
 BYTVAL= 000012
                                                                N.BUFB - 004000
                                                                                                                                                                                     992-1$1CD = 999949

992-1$MODE = 994999

992-1$0B = 99936

995-1$0BE = 914990

995-1$0BF = 919999
                                                                                                                                 SR.1IN
                                                                                                                                                      000024
                                                                                                                                                                                                                                                                WORD1 =
 CALLER 001044R
                                                      005 N.BUFW= 002000
                                                                                                                                 SR.1IP
                                                                                                                                                      000016
                                                                                                                                                                                                                                                                WORD2 - - 000004
 CF:COT= 000041
                                                                N.FOS -- 000764
N.QURY- 000031
                                                                                                                                 STUFF.
                                                                                                                                                      000000RG
                                                                                                                                                                                                                                                                WORD3 = 000006
 CF.DGN= 000046
                                                                                                                                 STUFI
                                                                                                                                                      001052RG
                                                                                                                                                                                                                                                                WORD4 =
                                                                                                                                                                                                                                                                                     000010
 CF.DHR=-000042
CF.DMC=-000047
                                                                 H.SUNT= 0000002
                                                                                                                                 STUFO
                                                                                                                                                      001700RG
                                                                                                                                                                                                T$0BRA= 000034
                                                                                                                                                                                      005
                                                                                                                                                                                                                                                                WORD5 = 000012
WORD6 = 000014
WORD7 = 000016
                                                                 PREADD= ****** GX
                                                                                                                                 STHET.
                                                                                                                                                     002610RG
                                                                                                                                                                                                T$0BWA= 0000032
                                                                                                                                                                                      005
 CF.HBR= 000045
                                                                 PRPERO
                                                                                     002450R
                                                                                                                      005
                                                                                                                                 TD$CTR=:176370
                                                                                                                                                                                                 T$0UTA= 100000
 CF:HRL= 000044
                                                                 PRPERR
                                                                                     000664R
003354R
                                                                                                                      005
                                                                                                                                 TD$CTW= 176360
                                                                                                                                                                                                T$RBD0=-000200
T$RNB---000040
                                                                                                                                                                                                                                                                WORD8 =
                                                                                                                                                                                                                                                                                     000020
 CF.UPD= 000043
                                                                 PRPERT
                                                                                                                      005
                                                                                                                                TD$INL=.004000
TD$MEM=.000270
                                                                                                                                                                                                                                                                WORD9 ≈ 000022 ÷
                                                                 PRPER 1
 CKDATA= ****** GX
                                                                                      001602R
                                                                                                                      005
                                                                                                                                                                                                 T$RSET= 040000
                                                                                                                                                                                                                                                                WRDVAL = 000024
 CK2 = ****** GX
                                                                 READ.
                                                                                     000540R
                                                                                                                                 TD$0AR= 176344
                                                                                                                                                                                                T$SC: =:000022
T$SCLK=:020000
T$SEG!= 000000
                                                                                                                                                                                                                                                                WRITE:
                                                                                                                                                                                                                                                                                     000514R
                                                                                                                                                                                                                                                                                                                      005
                                                                READI
                                                                                                                                TD$0TR=-176346
                                                                                     991544P
                                                                                                                      005
                                                                                                                                                                                                                                                                                     002340R
                                                                                                                                                                                                                                                                WRITEO.
                                                                                                                                                                                                                                                                                                                      005
DBSLEN= 000116
DG.ERR= 001000
                                                                 READO
                                                                                     002400R
                                                                                                                      005
                                                                                                                                TD$QRD=-000274
                                                                                                                                                                                                                                                                WRITET: 003244R
                                                                READT
                                                                                     003304R
 . ABS.
                     000000
                                                   001
SRCOFF
                                                   002
FDSCOF
                                                   003
FNOFFS.
                                                                                                                                                                                                                                                                 THE STATE OF THE S
                     000022
003514
                                                   004
 TTEST-
                                                   005
 ERRORS DETECTED:
VIRTUAL MEMORY-USED: 2241 WORDS- (-9 PAGES)
DYNAMIC-MEMORY: 2804 WORDS- (-10 PAGES)
ELAPSED-TIME: 00:00:29
                                                                                                                                                                                                                                                              The same of the sa
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TTEST, TTEST/-EF = 20, 1 JP, C, TTEST

LOCATION: MAP: TKB: PAGE: 1 27-MAR-80 **Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3** TMT. FSK:3 MEMORY-ALLOCATION-MAP

The state of the s

TASK NAME: : ...TMT PARTITION NAME: GEN NAME: | PHRTITION: NAME: GET | IDENTIFICATION: 0736 | TASK: UIC: : [7.5]: STACK: LIMITS: 040212-041211 001000 00512. PRG XFR ADDRESS: 045042

TOTAL ADDRESS : 043042: TOTAL ADDRESS : UINDOWS: 2. TASK: IMAGE: SIZE: : 6240, WORDS: TASK: ADDRESS: LIMITS: 040000 070253 R-W DISK: BLK: LIMITS: 000002:000032:000031 00025.

*** ROOT-SEGMENT: TMT-

R/W-MEM- LIMITS: 040000 070253 030254 12460. DISK-BLK-LIMITS: 000002 000032 000031 00025.

\$\$RESM:(RW.I.LCL.REL.CON) 132000 007656 04014.

MEMORY-ALLOCATION-SYNOPSIS:

SECTION. TITLE . . IDENT, FILE . . . BLK.:(RW.I.LCL.REL.CON) 041212-016562-07538. 041212-011506 TMT.OBJ;1 FDSCOF:(RW.I.LT.,ABS.CON) 000000 000000 00000 000000 000000 00000. TMT.OBJ;1 000000 00000. TTEST. FNOFFS: (RW. I, LCL, ABS, CON) 000000 000000 00000. 000000 000000 00000. TMT TMT.OBJ;1 000000 000000 00000. TTEST SRCOFF:(RW,I,LCL,ABS,CON) 000000 000000 00000. 000000 000000 00000. TMT TMT.OBJ;1 TTEST.OBJ;1 000000 000000 00000. TTEST 057774 003514 01868. TTEST: (RW.I,LCL, REL,CON) 003514 01868. TTEST TTEST.OBJ;1 \$\$F\$R1:(RW.D.GBL.REL.OVR) 063510 001020 00528. 963510 001020 00528. TMT \$\$FSR2:(RW.D.GBL.REL.CON) 064530 000104 00068. TMT.OBJ;1 \$\$RESL:(RW,I,LCL,REL,CON) 064634 003420 01808.

GLOBAL SYMBOLS:

CKDATA · 042506-R · ERW1 042522-R. STUFF. 057774-R. T1I· 061362-R · T12TU 061134-R Ti2ID 063152+R 060206-R 042510-R ERW2 042524-R STUF I 061046-R T10 -061750-R 061446-R T6F 969294-R T71. 061240-R: CK3 042512+R+ ERW3 042526-R+ ERRADD+042516-R+ MEMERR+047752-R+ ERRCT+ 042520-M+ PREADD+042514-R+ STUFO. 061674-R TIT. 862668-R T120D T120U 062166-R T61 061236-R 862956-R STUFT 062604-R T12FD T1F 060066-R T12FU 060334-R 062246-R T60 062054-R TZT. 062762-R T12FU-060422-R T12TD 063072-R-AT6T 062760-R

TMT. FSK:3 MEMORY- ALLOCATION: MAP. TKB. 27-MAR-80 **Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3** __

*** TASK BUILDER STATISTICS:

TOTAL-WORK-FILE-REFERENCES: 11893.
WORK- FILE- READS: 0.
WORK- FILE-WRITES: 0.
SIZE-OF-CORE-POOL: 6634. WORDS-(25. PAGES)
SIZE-OF-WORK-FILE: 2048. WORDS-(8. PAGES)

ELAPSED TIME:00:00:15

-

23

4 567

.FITLE - FMAIN -.LIST: MER:

TERM DETECTOR 'MANUAL' DEBUGGING AIDS MAIN-MODULE

THIS MODULE PASSES CONTROL TO ITS SUB-MODULES (COMMAND MODULES) BASED ON INFORMATION IN THE COMMAND LINE (TERMINAL INPUT). THE SUB-MODULES CONTINUE TO PARSE THE COMMAND LINE TRANSFERRING CONTROL TO THEIR SUB-ROUTINES. THE SUB-ROUTINES, DO THE ACTUAL INTERFACING WITH THE HARDWARE THUS THERE ARE THREE LEVELS OF CONTROL. FOR EXAMPLE, TAKE THE COMMAND SERVICE OF CONTROL.

THREE-LEVELS OF CONTRUL, FUR EXHIPPLE, THREE THE STATE OF STATE OF

SUB-MODULES OF TMAIN: TREG. REGISTER COMMANDS MEMORY COMMANDS INPUT BUTTER AND BYTE TRANSLATOR COMMANDS TDATA TRUN-RUN TD COMMANDS

 $\begin{array}{lll} {\tt CONTROL: IS: RETURNED: TO} & {\tt TMAIN: WHEN: A: COMMAND: HAS: BEEN} \\ {\tt EXECUTED: OR: ANND: ERROR: ENCOUNTERED:} \end{array}$

TMAIN-ALSO-CONTAINS-DATA-AND-SUBROUTINES-COMMON-TO-ALL-OF-ITS SUB-MODULES.

ASSEMBLY: MCR>MAC TMAIN, LP=IMO4, TMAIN

FROM-[5,3]

TASK BUILD: 1. TD-STAND-ALONE-PACK COMMAND-FILE-AIDTD.CMD AIDTD/DA.AIDTD=TMAIN.TREG.TDATA.TRUN

PAR=PAR14K ASG=TT0:1:2

TASK BUILD MUST BE DONE ON NPIC /04
MAPPING DOES NOT COME OUT RIGHT WHEN TKB IS DONE ON AS
EG. ADDRESS OF SYSTEM ROUTINE \$DIV COMES OUT AND RECTLY ********************************

AIDTD, AIDTD=AIDTD/MP. PAR=GEN:40000:40000

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Approved For Release 2005/07/12—CIA-RDP85-00514R000200020001-3
TMA IN.
                RO-M1110 27-MAR-80 13:39 PAGE-6
        66
67
                                                                                LOCAL DATA AREAS
        68
        69
70
71
72
73
74
75
76
78
                                                                                .MCALL GIOW#S.QIO#S.EXIT#S.ABRT#S.GCML#.GCMLB#.FSRSZ#.CLEF#S.MCALL ASTX#S.FDBDF#.FDRC#A.FDOP#A.NMBLK#.OPEN#R.GET#.CLOSE#
                                                                                .GLOBL - IO.WVB, IO.RVB, IO.ATA, IO.DET -
                          000001
000001
                                                                  EFN.1
LUN.TT
                                                                                                                        :EVENT.FLAG.FOR.TERMINAL.QIO'S
                                                                                                                        :TERMINAL LUN
                           000002
                                                                   CMILUN-
                                                                                                                        #GCML.LUN:
#LUN:FOR DISK: *DATA* FILE:
#LUN:FOR DISK:BYTE TRANSLATOR:OVERRIDE FILE:
         80
                           000003
                                                                   TXTLUM:
        81
                          000004
                                                                   TRLUM.
        82
                                                                                                                       ;LOOP-ON TEST-FLAG
;PRINT-ONE-WORD-ONLY-
;QIO-+AST-ISSUED-
;BYTE-TRANSLATOR-OVERRIDE-IN EFFECT
;REPEAT-PROMPT-
;PRINT-OUTPUT-BUFFER-CONTENTS-
;DO-NOT-PRINT-OB-CONTENTS-
;CONTROL PRINTING-OF-MEMORY-CONTENTS-
        83
                           000004
                                                                   LOOP
                           000010
                                                                   ONCE -
                                                                                              10
        85
                           000020
                                                                   ASTFLG
                                                                                             20
        86
87
                                                                   RIDE ·
                           000100
                                                                                ==
                                                                                             100
                           000200
                                                                                             200
                                                                   QP -
                                                                                             400
        88
                           000400
        89
                                                                   QΝ٠
                                                                                              1000
                           001000
        90
                           002000
                                                                   OUT:
                                                                                              2000
        91
         93
                                                                                             BEX-
                                                                   MYSELF:
STAT::
                                                                                             ZAIDTDZ-
2-
         94
             000000
                          003654
                                       076640
                                                                                .RAD50
         95
             000004
                                                                                , BLKW.
             000010
                           000000
                                                                   ERWORD: .WORD
                                                                                                                        ; INDEX: VALUE: FOR: ERROR: MESSAGE: TABLE: ; TARGET: FOR: NUMERIC: CONVERSIONS: FROM: ASCII:
         97
             000012
                           000000
                                                                   BINWD:: .WORD
                                                                   BASE:: .WORD
APLACE:: .WORD
GCMBUF:: .BLKW
         98
             000014
                           000000
                                                                                             0
                                                                                                                        :ALL · PURPOSE · FLAG
                                                                                                                        #PRELIM-BIT-SETTINGS-FOR-TD-CONTROL-REG-(TD$CTW)
#COMMAND LINE-BUFFER-
#COMMAND LINE-LENGTH-
         99
             000016
                           000000
       100
              000020
       101 000142
102 000144
                           ававая
                                                                   GCMLEN: .WORD.
                                                                                                                       COMMAND LINE LENGTH
COMMAND LINE POINTER
RECEIVER FOR AST CHAR
RTN-ADDR SAVE AREA
START ADDR FOR MEMORY LOADING PRINTING
WORKING ADDR FOR LOADING PRINTING
MEMORY INCREMENT VALUE
COMMAND LINE) RESPONSE COUNT
MEMORY UPPER LIMIT
COUNTER FOR 8 TO 6-BIT CONVERSION
LENGTH OF DATA: BUFFER
WOFF SET INTO DATA: BUFFER
LENGTH OF CHANGE DATA + CHANGE START ADD
                           000000
              000146
                                                                   ASTWRD: .WORD
                           000000
                                                                   RTMPT: .WORD
MSTRT: .WORD
MSTR2: .WORD
       104 000150
105 000152
                           000000
        106
              000154
                           000000
                                                                   MEND:: .WORD
INCVAL:: .WORD
RSPCHT:: .WORD
       107
              000156
                           000000
                           000000
       108
             000160
                                                                                             Й
        109
              000162
                           000000
                                                                  UPLIM:: .WORD
COUNT:: .WORD
DATALN:: .WORD
DPLUS:: .WORD
OFF6:: .WORD
       110 000164
                           000000
       111 000166
                           000000
000000
       112-000170
       113 000172
                           000000
                                                                                             Ø
       114 000174
                           000000
                                                                                                                        LENGTH OF CHANGE DATA + CHANGE START ADDRESS
                                                                   CHLEN:: .WORD
       115 000176
                           000000
        116
                                                                                                                        GONVERTED NUMERIC VALUES FROM COMM LINE)
              000200
                                                                   ₩WORDS::
                                                                   DATA1:: .WORD.
DATA2:: .WORD.
       118 000200
                           000000
       119 000202
                           000000
                                                                                             Ø
                          000000
       120 000204
                                                                   DATA3:: .WORD
       122
                                                                                MEMORY-LIMITS-
                                                       Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
```

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TMAIN: MACRO :11110 27-MAR-80 13:39 PAGE:6-1
                                      Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
         000206
000210
                                              ÁHIGH:: .WORD
ALOW:: .WORD
                  882227
                                                                                    :FSA-A-
    124
     125
                  000000
                                                                 Ø
     126
         000212
                                               BHIGH::
                                                                                    ;FSA·B
     127
         000214
                  000000
                                               BLOW::
                                                        .WORD
    128-000216
129-000220
                  997777
                                              CHIGH::
                                                        . LIDED
                                                                 7777
                                                                                    :FSA · C
                  000000
                                                        .WORD
         000222
                                               IHIGH::
                                                        .WORD
     130
                   163776
                                                                                    : INPUT - BUFFER -
     131
         000224
                   160000
                                               ILOW::
                                                        .WORD
                                                                  160000
     132
        · 666226
                  883776
                                               OHIGH::
                                                        JUNED
                                                                 3776
                                                                                    :OUTPUT BUFFER
     133 000230
                                                        .WORD
                  000000
                                                                 Й
                                               OLOW:
                                               THIGH::
                                                        .WORD
         000232
                  000377
                                                                                    :BYTE - TRANSLATOR
     135
         000234
                  000000
                                               TLOW::
                                                        .WORD
                                                                 0
     136
     137
     138
                                                        ROUTINE · CONTROL · TABLES
     139
                                                        COMMAND MNEMONICS AND ASSOCIATED ROUTINE ADDRESSES
     149
     141
     142
         000236
                                               CTBL::
     143
         000236
                      123
                               124
                                                        .ASCII-
                                                                  /ST/
                                                                                    ;STORE · INTO · A · REGISTER
                                                                 STI
                  000000G
     144
         000240
                                                        .WORD
     145
         000242
                                105
                                                        .ASCII
                                                                 ZREZ
                                                                                    :READ-A-REGISTER
         000244
                   000000G
                                                        .WORD
                                                                 RE1
     147
         000246
                      114
                                104
                                                         .ASCII
                                                                  /LD/
                                                                                    :LOAD - A - MEMORY -
                   000000G
     148
         000250
                                                         .WORD
                                                                 LDA
                                                        .ASCII
                                                                                    :PRINT MEMORY CONTENTS TO CONSOLE
         000252
                               122
     149
                                                                  /PR/
                      120
         000254
                   000000G
                                                         .WORD
                                                                 PR1
         000256
000260
000262
                  104
000000G
     151
                                101
                                                         .ASCII
                                                                  ZDAZ
                                                                                    :SIMULATE · DATA · BASE
     152
                                                         . MORD
                                                                 DA L
                                110
                                                         .ASCII
                                                                  /CH/
                      103
                                                                                    :CHANGE · SIMULATED · DATA ·
         000264
                   000000G
                                                         .WORD
                                                                 CH1
     155
         000266
                      114
                                111
                                                         .ASCII
                                                                  /L I /
                                                                                    :LIST-SIMULATED-DATA
     156
         000270
                   000000G
                                                         .WORD
                                                                 1. T 1
         000272
                                                         .ASCII
     157
                      105
                                116
                                                                  ZENZ
                                                                                    ;CONTROL LENGTH OF SIMULATED DATA
                                                         .WORD
         000274
                   000000G
                                                                 EH1
     159
         000276
                      104
                                106
                                                         .ASCII
                                                                  ZDF z
                                                                                    :READ SIMULATED DATA OR BYTE TRANSLATOR?
                                                                                    :DATA IN FROM DISK
:TRANSFER (BYTE TRANS OR INPUT BUFFER)
     168
         000300
                   000000G
                                                         .WORD
                                                                 DF 1
         000302
                                                         .ASCII
     161
                                122
                                                                  ZTR2
                      124
                                                                                    FROM PROGRAM MEMORY TO TD
         000304
                                                         .WORD
     162
                   000000G
                                                                  TR1
     163
         000306
                                123
                                                         .ASCII
                                                                  ZRS.
                                                                                    ; RESET · TERM · DETECTOR
     164
         000310
                   010606
                                                         .WORD
                                                                  RS1
                                                         .ASCII
         000312
                                125
                                                                  ZRHZ
                                                                                    : RUN - TERM - DETECTOR
     165
                      122
                                                         .WORD
         000314
                   000000G
     166
                                                                 RHI
         000316
                      105
                                130
                                                         .ASCII
                                                                                    :EXIT TO EXERCISER 🚐
                   0106201
     168 000320
                                                         .WORD
                                                                  EXI
                                               CHUM
     169
                   000015
                                                                  <.-CTBL>/4
```

```
TMA IN
               ₽O-M1110 27-MAR-80 13:39 PAGE-7
                                           Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
     171
     172
173
                                                                'DATA'
                                                                         TABLES
     174
                                                                DTBL .
                                                                                      6-BIT TABLE.
     175
                                                                DSAVE
                                                                                      ASCII MIRROR OF 8-BIT INPUT.
     176
177
          000322
002322
005046
     178
                                                     DTBL::
                                                                .BLKW-
                                                                          <<1364.*3>/8.>+1
                                                     DSAVE:: .BLKB
     180
                                                     DSEND::
     181
          005046
                         000
                                                                .BYTE
                                                                          0
     182
     183
                                                                CONVERSION TABLE FOR * DATA:
     184
     185
     186
          005050
                                                     TR6TBL::
     187
          005050
                                              377
377
                                                                                                          :CODES-0 - 11 UNUSED
                                                                BYTE
                                                                          -1,-1,-1,-1,-1
     188
          005055
                         377
                                                                BYTE
                                                                          -1,-1,-1,-1,-1
     189
          005062
                         075
377
                                                                          75
                                                                                                          :LINE-FEED
                                   377
                                                                                                          CODES:13 -14 UNUSED:CARRAIGE:RETURN:
                                                                .BYTE
                                                                          -1 - 1
     191
          005065
                         074
                                                                BYTE
                                                                          74
     192
          005066
                         377
                                   377
377
                                              377
377
377
                                                                .BYTE
                                                                           -1,-1,-1,-1,-1,-1
          005074
                         377
                                                                .BYTE
     194 005102
                                                                .BYTE
          005110
005111
     195
                         040
                                                                BYTE
                                                                          48
     196
                                                                                                          EXCLAMATION POINT...
QUOTES
POUND SIGN...
DOLLAR...
                         041
     197
          005112
                         042
                                                                .BYTE
                                                                          42
     198
          005113
                         043
                                                                BYTE
                                                                          43
     199
          005114
                         944
                                                                          44
     200
          005115
                         045
                                                                .BYTE
                                                                          45
     201 005116
202-005117
                         046
                                                                .BYTE
                                                                          46
47
                                                                                                          : AMPERSAND
                                                                                                          APOSTROPHE :
:LEFT PAREN :
:RIGHT PAREN :
                         947
                                                                .BYTE
     203 005120
                         050
                                                                          50
                                                                .BYTE
          005121
                         051
                                                                .BYTE
     205 005122
                         052
                                                                .BYTE
                                                                          52
                                                                                                          : ASTERISK -
          005123
005124
005125
     206
                         053
                                                                .BYTE
                                                                          53
54
     207
                         B54
                                                                .BYTE
                                                                                                          :COMMA
                         055
     208
                                                                                                          :HYPHEH
     209
          005126
                         056
                                                                .BYTE
     210 005127
211 005130
                         057
                                                                          57
                                                                . BYTE
                                                                                                          :SLASH.
                         060
061
                                                                .BYTE
                                                                          60
                                                                                                          :0
     212 005131
213 005132
                                                                          61
                                                                                                          : 1
                         062
                                                                BYTE.
                                                                          62
63
     214 005133
215 005134
                         063
                                                                .BYTF
                         064
                                                                                                          :4
     216
                         065
                                                                .BYTE
                                                                                                          :5
     217
          005136
                                                                .RYTE
                                                                          66
                                                                                                          ;6
     218 005137
                        067
070
                                                                .BYTE
                                                                          67
     219
          005140
                                                                          70
71
72
                                                                                                          :8
:9
          005141
                         071
                                                                .BYTE
     221 005142
222 005143
                         072
                                                                .BYTE
                                                                                                          #COLON:
#SEMI-COLON:
#LEFT: ANGLE BRACKET NOT USED
#EQUAL SIGN NOT USED
#RIGHT: ANGLE BRACKET NOT USED
                        973
377
                                                                          73
                                                                .BYTE
     223
          005144
                                                                .BYTE
    224 005145
                        377
                                                                .BYTE
    225 005146
226 005147
                        377
                                                                .BYTE
                        077
                                                                BYTE
                                                                                                          :QUESTION MARK
    227 005150
                        000
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MACRO '4110 27-MAR-80 13:39 PAGE 7-1
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TMA IN
                                                                                .BYTE
                                                                                            01
      228.005151
                               001
                                                                               BYTE
                                                                                            02
                                                                                                                                    ;В
      229
230
            005152
                               002
                                                                               .BYTE
.B'TE
.BYTE
             005153
                               003
                                                                                            03
      230 005153
231 005154
232 005155
233 005156
234 005157
235 005160
236 005161
                                                                                            04
05
                               004
                                                                                                                                    ; D
                                                                                                                                    ;E
;F
                               005
                                                                                BYTE
                                                                                            06
                               006
                               007
                                                                                            07
                                                                                                                                    ; G
                                                                                .BYTE
                               010
                                                                                             10
                                                                                                                                    ;Н
             005161
005162
                               011
                                                                                             11
                                                                                                                                    : I
      237
                               012
                                                                                .BYTE
                                                                                             12
      238
239
             005163
                                                                                .BYTE
.BYTE
.BYTE
                                                                                             13
                               014
015
                                                                                             14
15
                                                                                                                                    ; L .
             005164
      240
             995165
       241
             005166
                               016
                                                                                .BYTE
                                                                                            16
17
20
21
22
23
24
25
26
27
30
                                                                                                                                    : N
                                                                                .BYTE
                                                                                                                                    ;0
;P
       242.005167
                               017
       243
244
             005170
005171
                               020
021
                                                                                BYTE
                                                                                                                                    ; Q :
             005171
005172
005173
005174
       245
                                022
                                                                                .BYTE
                                                                                                                                    ۶Ř
                                                                                .BYTE
.BYTE
.BYTE
       246
                               023
                                                                                                                                    ;5
       247
                               024
                                                                                                                                    ; T
       248
             005175
                               025
                                                                                .BYTE
.BYTE
.BYTE
       249
             005176
                                026
             005177
                               027
030
       250
                                                                                                                                    ; W:
       251
             005200
                                                                                                                                    :×
                                                                                BYTE
                                                                                             31
                                                                                                                                    ;Z;
;LEFT:SQ:BRACKET:- ZONE:
;BACK:SLASH:- SUBZONE:::
                                                                                            32
33
34
       253
             005202
                                032
                                                                                .BYTE
       254
             005203
                               033
                                                                                .BYTE
       255
             005204
                                034
       256 005204
256 005205
257 005206
258 005207
259
                                035
                                                                                .BYTE
                                                                                             35
                                                                                                                                    :RGT-SQ-BRACKET-- PARA
                                                                                                                                    ;UP-ARROW- SENT:
;UNDERBAR- CLOSE-UP
;CODES:140 - 177 NOT USED:
                                                                                .BYTE
                                036
                                                                                             36
                                037
                                                                                             37
       260
                                                                                .NLIST
                                                                                             MEB.
       261
262
263
264
                           000040
                                                                                .REPT
                                                                                             40
                                                                                .BYTE.
.ENDR.
.LIST.
                                                                                             -1
                                                                                             MEB
                                                                                .EVEN
```

Marin Communication of the com

Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3 TMAIN. 267 268 269 270 271 DEFAULT BYTE TRANSLATOR TABLE BTRANS:: 005250 : DOCUMENT - START . WORD 002077 273 002077 005250 274 005252 000001 .WORD :B 275 005254 000002 .WORD คคว 2345 993 276 277 005256 ававаз JUNED. 005260 0000004 .WORD 004 278 279 280 005262 000005 .WORD 005 ; E 6 7 . MORD 006 005264 ававая 005266 000007 .WORD 007 10 .WORD .WORD 281 005270 000010 010 : H 282 - 885272 011 999911 12 13 283 005274 000012 .WORD 012 284 005276 285 005300 .WORD 013 014 000013 000014 15 16 17 286 005302 .WORD 015 :M. 016 033 207 005304 000016 JUNED : N .WORD 288 005306 000033 289 005310 .WORD 034 021 ; P 20 21 22 23 24 ; Q 290 005312 000021 000022 HORD 022 .WORD 291 005314 005316 000023 .WORD 023 292 .WORD .WORD 293 005320 000024 924 2 T 25 26 27 025 294 005322 999925 005324 .WORD 026 295 000026 296 005326 005330 000027 .WORD 827 030 ; X ; Y 297 298 . MORD ийийи3й 31 32 33 34 005332 000031 .WORD 031 299 005334 000032 .WORD 032 949933 : ZONE · MARK 300 005336 040033 .WORD 100034 :SUBZONE · MARK .WORD 301 005340 100034 .WORD 010035 :PARAGRAPH MARK 35 302 - 005342 010035 36 004036 437 :SENTENCE :CLOSE · UP 303 005344 004036 .WORD 37 .WORD 304 005346 000437 ;SPACE: ;EXCL:POINT: ;QUOTE: 305 005350 .WORD 40 000400 .WORD BIT8 BIT8 41 005352 42 43 397 005354 000400 308 005356 000301 .WORD ; POUND 309 005360 .WORD 302 :DOLLAR : PERCENT 4<u>4.</u> 45. 000302 310 005362 000400 . WORD BIT9 віте : AMPERSAND .WORD 311 005364 312-005366 999499 ; APOSTROPHE ; LEFT PAREN 47 50 000400 .WORD BIT8 313 005370 000400 . WORD BIT8 BITE :RIGHT PAREN .WORD 51 52 55 55 56 314 005372 315 005374 000400 ; ASTERISK . 000400 .WORD BITS 316 005376 317 005400 000400 .WORD BIT8 317 318 .WORD BITS : COMMA 999499 005402 000400 .WORD BIT8 : HYPHEN-**---**:PERIOD 319 005404 320 005406 999499 .WORD BIT8 000400 .WORD :SLASH 57 BIT8 257 277 60 61 321 005410 000257 .WORD :0 .WORD : 1 322-005412 000277 .WORD 057 62 323 005414 000057

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     324 005416
325 005420
326 005422
327 005424
328 005426
                        000077
                                                                           .WORD
                                                                                                                                                     63
64
65
                        000117
                                                                           .WORD
                                                                                       117
                                                                                                                            :4:567
                                                                                       137
157
177
217
237
                        000137
                                                                           .WORD
                        000157
                                                                           .WORD
                                                                                                                                                     66
67
70
71
72
73
74
75
76
77
                        000177
000217
                                                                           .WORD
      329 005430
330 005432
                                                                           .WORD
                                                                                                                            ;8
;9
                        000237
                                                                           .WORD
     331 005434
332 005436
333 005440
334 005442
                        000400
                                                                           .WORD
.WORD
                                                                                       BIT8
                                                                                                                            :COLON-
                         000400
                                                                                      BIT8
BIT8
                                                                                                                            :SEMI-COLON-
                        000400
000400
                                                                           .WORD
                                                                                      BIT8
303
BIT8
                                                                           .WORD
      335 005444
336 005446
337 005450
                        000303
                                                                          .WORD
                        000400
                                                                                                                            :DECIMAL
                             000
                                                              BTEND:: .BYTE
                                                                                       0
      338
339
340
341
                                                                           .EVEN.
                                                                          BYTE TRANSLATOR OVERRIDE TABLE
      342 - 005452
                                                              BTOVER::
      343 005452
                                                                          .BLKW-
                                                                                      <BTEND-BTRANS>/2
```

```
27-MAR-80 13:39 PAGE 9
                                   Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
345
346
347
                                                     PRINT-LINE
348
349 005652
                  015
                            012
                                                      .BYTE
                                                                                            PRECEDE PRINT LINE WITH CRLF
                                                               15.12
350
     005654
                                            PRINT::
351
352
                                                      .N_IST
                                                               MEB
              000116
                                                      .REPT
                                                               78.
353
                                                      .BYTE
                                                               40
                                                      .ENDR
355
                                                                                                                              . .
                                                      .LIST
                                                               MEB
356
357
                                                     TABLE · OF · MESSAGES ·
359
360
361
     005772
                  000
                                                      .BYTE -
                                                               Й
     005773
                  015
124
                            012
                                      015
                                                     .BYTE
                                                               15, 12, 15, 12
363
     005777
                            185
                                      123
                                                               /TEST(S) ENDED/
364
     006015
                  015
                            012
                                                      .BYTE
                                                               15.12
                                                               /END OF FILE REACHED/-
365
     006017
                   105
                            116
                                      104
                                                      .ASCIZ
366
     006043
                  0.15
                            012
                                                      .BYTE
     006045
                  105
                                      104
                                                               ZEND OF MEMORY REACHEDZ.
                            116
                                                      .ASCIZ
368
     006073
                  015
                            012
                                                     .BYTE.
369
     006075
                  105
                                      124
                                                               ZENTER ANY CHARACTER TO EXIT LOOP/-
15,12,15,12,15,12
ZTERM DETECTOR MANUAL DEBUGGING AIDS/-
370
     006136
                  015
124
                            012
                                      015
                                                      .BYTE
371
     006144
                            105
                                      122
                                                      .ASCII
372
    666267
                  015
                                     000
                                                      .BYTÉ
                                                               15.12.0
15.12
373
     006212
                  015
111
                            012
                                                      BYTE
374 006214
                            114
                                                     .ASCIZ
.BYTE
                                                               /ILLEGAL ODD ADDRESS/
                                      114
375
     006240
                  015
                                                               15.12

/FOR BT, 'CHANGE' COMMAND MUST PRECEED 'LIST'/
376
     006242
                  106
015
                            117
                                      122
                                                     .ASCIZ
     006317
                            012
                                                     .BYTE
                                                               15,12
378
                  111
                            114
                                      114
                                                      .ASCIZ
                                                               /ILLEGAL CHARACTER IN ** DATA*/
379
     886355
                  015
                                                     .BYTE.
380
     006357
                  123
015
                            124
                                      101
                                                               /START ADDRESS OUT OF RANGE HIGH/
381
     006417
                            012
124
                                                     BYTE
                                                               15,12
                  123
015
111
382
     006421
                                     101
                                                     .ASCIZ
.BYTE
                                                               /START-ADDRESS OUT-OF-RANGE-LOW/
383
     006460
                            012
                                                               15, 12
     006462
                            116
                                     126
                                                      .ASCIZ
                                                               /INVALID TABLE NAME/
385
     006505
                            012
                                                               15.12.
/BYTE:TRANSLATOR:TABLE:OVERFLOW/
                                                     .BYTE.
386
     006507
                  102
015
                            131
                                     124
     006546
                            012
                                                      .BYTE
                                                               15.12
388
    006550
                  105
                            115
                                                     .ASCIZ
.BYTE
.ASCIZ
                                                               /EMPTY-INPUT-LINE-IN-BYTE-TRANSLATOR-FILE/
                                     120
                            012
122
389
    006621
                  015
390
    006623
                  105
015
                                                               /ERROR.ON.READ OF.BYTE.TRANSLATOR.FILE/
391
     006671
                           012
122
012
                                                      BYTE
                                                               15,12
392
    006673
                  105
                                     122.
                                                     .ASCIZ
                                                               ZERROR ON OPEN OF BYTE TRANSLATOR FILE
393
    006741
                  015
                                                     .BYTE
                                                               15,12
                  105
015
394
    006743
                            122
                                     122
                                                      .ASCIZ
                                                               /ERROR.ON.READ OF. DATA: FILE/
    007000
007002
395
                           012
122
                                                               15,12
396
                  105
                                     122
                                                      .ASCIZ
                                                               ZERROR-ON-OPEN OF "DATA" FILEZ.
                            012
397
    007037
                  015
                                                               15,12.
/INVALID.FILE.MNEMONIC/.
                                                     .BYTE
398
    007041
                  111
015
                           116
012
                                     126
                                                     .ASCIZ
399
    007067
                                                              15,12.
/*DATA: COMMAND.MUST.PRECEED.1END://
                                                     .BYTE
400 007071
401 007133
                            104
                                     101
                                                     .ASCIZ-
                  015
                           012
                                                     .BYTE
                                   Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
```

TMAIN

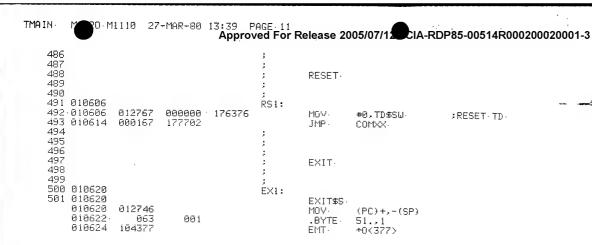
0 · M1110

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```
MACRO M1110 27-MAR-80 13:39 PAGE 9-1
Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
TMA IN
    402 - 007135
                       047
                                114
                                          111
                                                           .ASCIZ.
                                                                   //LIST: START-ADDRESS-OUT-OF-RANGE/
         007177
007201
007244
    403
                       015
                                012
                                                                   15.12
/*DATA* COMMAND-MUST-PRECEED-*LIST*/
                                                          .BYTE
    464
                       047
                                 104
                                          101
                                                          .ASCIZ-
                       015
    405
                                012
                                                          .BYTE
         007246
                       047
    406
                                194
                                          101
                                                          .ASCIZ
.BYTE
                                                                    / DATA: COMMAND MUST PRECEED CHANGE:/
    407
                       015
                                012
                                                                   15.12
/INVALID-MEMORY-MNEMONIC/
    408 007315
                       111
                                116
                                          126
                                                          .ASCIZ
    409
         007345
                       015
                                012
                                                          .BYTE
    410
         007347
                       111
                                          126
                                                          .ASCIZ
                                 116
                                                                    /INVALID-REGISTER-MNEMONIC/
    411 007401
                       015
                                012
                                                                    15.12
    412-007403
                       111
                                116
                                          126
                                                          .ASCIZ
                                                                    /INVALID-NUMERIC-VALUE/
    413 007431
                       015
                                012
                                                          .BYTE
     414 007433
                       115
                                                          .A3CIZ
.BYTE
.ASCIZ
                                          123
                                111
                                                                   /MISSING.OPERAND/
    415 007453
416 007455
                       015
                                012
                                                                   15.12.
/INVALID.COMMAND/.
    416
417
                       111
                                 116
         007475
                       015
                                012
                                                          .BYTE
                                                                    15,12
     418
         007477
                       111
                                 116
                                          126
                                                          .ASCIZ
.BYTE
                                                                    /INVALID-LOOP-CONTROL/
     419 007524
                       015
                                012
                                                                   15, 12
         007526
     428
                       105
015
                                 116
                                          124
                                                          .ASCIZ
                                                                   ZENTER CORRECT RESPONSE
                                                                                                                                ĄΈ.
     421
         007555
                                012
                                                          .BYTE
                                                                                                                             3 23
     422 - 007557
                       105
                                116
                                          124
                                                          .ASCIZ
                                                                   /ENTER · COMMAND/ 15,12 ·
    423 007575
424 007577
                       015
                                012
                                                          .BYTE
                       123
377
                                 105
                                          114
                                                          .ASCIZ
                                                                   /SELECT BASE/
     425
         007613
                                                ASCIZ:
                                                          .BYTE
                                                                   377
    426
427
                                                          .EVEN
                                                                   BEX
     428
                                                          .NLIST CHD
     429
     430
    431
                                                          COMMAND LINE MACRO
    432
     433
    434 007614
007614
007656
                                                GCMBLK: GCMLB$
                                                                   2,,GCMBUF,CMILUN
                      002
002
                                                          .BYTE
                                                                   ČMILUH:
                                                          .BYTE
         007662
                   0100023
                                                          . MORD
                                                                   65$
         007670
                       001
                                                          .BYTE
         007633
007754
007755
                       0000
                                                          .BYTE
                                                                   FD.TTY!FD.REC!FD.CCL.
                       000
                                                          .BYTE
                       047
                                                          .BYTE
                                                                   GE.COM!GE.IND!GE.CLO!GE.SIZ
         007766
007770
007772
                                002
                                                                   -1.2
                   0100423
                                                          .WORD
                                                                   64$
                   0000201
                                                          .WORD
                                                                   GCMBUF
         007774
007776
                                                          .ASCII <15><12>
                       015
                                012
                       040
                                040
                                          949
         010001
                       076
         010010
                   012324
                                                          .RAD50
                                                                   /CMI/
         010012
                   000000
                                                          .WORD.
                                                                   8
         010014
                   000000
                                                                 . 0
         010016
                   012314
                                                          .RAD50
                                                                  ZCMD/
         010040
                   000120
                                                          .WORD
                                                                   80.
    435
    436
                                                         FDB.FOR.DISK 'DATA' FILE
    437
                                                                                                                           MET CONTRACT
    438
         010122
                                                TXTFDB:: FDBDF$
         010262
                                                         FDRC$A GCMBUF,00.
                                                                                                                             :\epsilon
         010144
                  0000201
                                                          .WORD
                                       Approved For Release 2005/07/12
                                                                             CIA-RDP85-00514R000200020001-3
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TMA IN RO-M1110 27-MAR-80 13:39 PAGE-9-2 Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3 010142 000120 . LuuRD 80. 440 010262 FDOP\$A .BYTE TXTLUH, TXTHMB 003 010164 010170 0102624 .WORD TXTNMB DATA, TXT ZDATAZ 441 010262 TXTHMB: HMBLK\$ 014474 000000 010270 010274 003100 .RAD50 .WORD 010276 100324 ŽTXTZ. .RAD50 442. 443 444 FDB-FOR-BYTE TRANSLATOR-OVERRIDE TRFDB:: FDBDF\$
FDRC\$A 010320 446 010460 .GCMBUF.80. 0000201 000120 010342 010340 .WORD GCMBUF -.WORD 447 010460 FDOP\$A BYTE TRLUH, TRHMB 010362 004 TRLUN. 0104601 010366 .WORD TRHMB. 010460 TRHMB: NMBLK\$ TRANS, TXT 010466 055170 .RAD50 .WORD /TRANS/ Ø 010472 000000 Й1Й474 RAD50 FSRSZ\$ ZTXTZ 2 100324 449 010516

```
MACRO M±110 27-MAR-80 13:39 PAGE 10 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
TMA IN-
     451
    452
453
                                                             ENTER HERE
     454
     455
     456 010516
                                                   START:
     457
                    004767
         010516
                              003052
                                                             JSR
                                                                        PC,OUT1
                                                                                            : ISSUE · INFORMATION MESSAGE
     459
     460
     461
                                                             TOP - OF - COMMAND - LOOP -
     462
     463
464 010522
465 010522
                                                   COMXX::
                    004767
                              883212
                                                                                            :PROMPT FOR COMMAND
:FIND THE COMMAND
:OK, CONTINUE
                                                              JSR
                                                                        PC.SELTST
     466 010526
                    004767
                              002346
                                                             JSR
                                                                        PC.FIND:
     467 010532
                     103003
                                                             BCC
                                                                        1$
     468 010534
                    004767
                               003164
                                                             JSR
                                                                        PC, ERR2
                                                                                            : "INVALID COMMAND:
     469
          010540
                    000770
                                                             BR
                                                                        COMXX
     470 010542
471 010546
472-010550
                    022700
                              000002
                                                   1$:
                                                             CMP
                                                                        #2,R0
                                                                                            COMMANDS ARE 2 CHARS
                    001403
                                                             BEQ
                                                                        2$
PC,ERR2
                                                                                            ;"INVALID-COMMAND:
;TRY-AGAIN-
                    004767
                              003150
                                                              JSR
     473
          010554
                    000762
                                                             BR
                                                                        COMXX
     474
475 010556
                    012700
012702
                              000015
000236
                                                                        #CHUM,RØ
#CTBL,R2
                                                             MOV
                                                                                            #RØ = NUMBER OF COMMANDS : #R2 -> TABLE OF VALID COMMANDS : FIND MATCH IN TABLE
     476
          010562
                                                             MOV:
     477
          01056E
                    004767
                              002214
                                                             JSR -
BCC -
JSR -
                                                                       PC,SCAN.
3$
     478 010572
                    103003
                                                                                            :OK, CONTINUE
     479 010574
                    004767
                              003124
                                                                        PC, ERR2
                                                                                            : COMMAND NOT IN TABLE
     480 010600
                    000750
                                                             BR
                                                                       COMXX.
                                                                                            :TRY-AGAIN-
                                                                                                                           1
     481
     482
                                                             JUMP TO THE ROUTINE THAT GOVERNS THE COMMAND
     483
                                                                                                                              ţ,
     484 010602 000171
                              000000
                                                   3$:
                                                                       @(R1)
```



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TMAIN.
         MACRO-M1110 27-MAR-80 13:39 PAGE-12
                                          Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
     503
     504
                                                              SET.UP.BEFORE.PROMPTING.ON.ANY.*LD* COMMAND.OR.BEFORE
     505
                                                             EXECUTING ANY 'PR' COMMAND FOR FSA A, B, C. THE FIELDS SET UP HERE ARE USED IN THE TMAIN PROMPTING SUBROUTINE
     506
     507
                                                             PDATA: (LDCNTL-FOR-FSA'S) AND THE PRINT ROUTINE PRDATA: (PRCNTL-FOR-FSA'S).
     509
510
     511
                                                              INPUT:
                                                                       LOAD/PRINT.START.ADDRESS
LOWER.MEMORY.LIMIT.
UPPER.MEMORY.LIMIT.
                                                              2(SP)
     513
514
                                                              4(SP)
                                                              6(SP)
                                                              APLACE: - FSA: SELECTION
     516
     517
                                                              OUTPUT:
     518
                                                              INCVAL: - VALUE:BY:WHICH:MEMORY:ADDRESS:INCREMENTS:
MEND: - ADDRESS:OF:LAST:WORD:IN:MEMORY:TO:BE:LOADED/PRINTED
     520
521
                                                                       - NUMBER OF WORDS TO EXPECT IN COMMOND LINE (MEMORY WIDTH):
                                                              RSPCNT-
                                                             C-BIT-CLEAR
                                                                                  NO-ERROR-(START-ADDRESS-IS IN-RANGE)...
     523
                                                             C-BIT-SET-
                                                                                  ERROR · IN · RANGE
     524
     525
     526
                                                              MEMORY
                                                                                  INCVAL
                                                                                                       RSPCHT
                                                             FSA · A
                                                                                                       3
     528
                                                              ESA B
                                                                                                       3
     529
                                                              FSA C
     530
     531
     532-010626
                                                   BUFFSA::
     533 010626
                    012767
                               000000
                                                             MOV-
                                                                                            :RESET.TD.
:START.CLOCK
                                                                        #0.TDsSU
     534 010634
                    052767
                               020000
                                         167154
                                                             BIS
                                                                        #T$SCLK,APLACE
APLACE,TD$CTW
     535 010642
                    016767
                               167150 :
                                         176368
                                                                                                                            vē.
                                                                                            ;SET.TD.CONTROL.REG
     536
     537
                                                             IF THE FIELD MEND IS NOT = -1. THEN A LD TOR
PR: ROUTINE HAS PUT A MEMORY UPPER LIMIT IN
THIS FIELD, EG. A COMMAND SUCH AS:
     538
539
     540
                                                              >LD-AM-0 10
     54i
                                                             WOULD PUT 10 IN THE FIELD MEND:
     542
     543 010650
                    022767
                                         167300
                                                              CMP -
                                                                                            ; MEMORY · END · ADDR · SET · UP ·
     544 010656
                    001003
                                                             BNE
                                                                        105
                                                                                             ;YES
     545
         010660
                               000004
                                         167270
                                                                        4(SP), MEND
                                                              MOV
                                                                                            ;SET END ADDR - MEMORY UPPER LIMIT.
     546
         010666
                    026766
                               167260
                                         000002
                                                              CMP
                                                                        MSTRT,2(SP)
                                                                                            :IS LOAD ADDRESS IN RANGE (LOW)
:OK, CONTINUE
:OUT OF RANGE
     547
          010674
                    103003
                                                             BHIS
                                                                        1$
     548 010676
                    004767
                              002716
                                                                        PC.ERR19
                                                              JSR -
     549 010702
                    000432
                                                             BR
                                                                        BUFCX-
                                                                                            :IS ADDR IN RANGE (HIGH)
         010704
     550
                    026766
                               167246
                                         000004
                                                              CMP
                                                                        MEND, 4(SP)
     551 010712
                    101403
                                                                                            :YES, CONTINUE:
:OUT OF RANGE:
                                                             BLOS
                                                                        2$
     552.010714
                    004767
                               002674
                                                                        PC.ERR20
                                                              JSR -
     553 010720
554 010722
                    000423
                                                             BR
                                                                        BUECX:
                    026767
101403
                               167224
                                         167226
                                                             CMP
                                                                        MSTRT, MEND
                                                                                            : IS \cdot START \cdot ADDR \cdot LOWER \cdot THAN \cdot END \cdot ADDR
     555
         010730
                                                             BLOS
JSR·
                                                                        3$
                                                                                            :YES, CONTINUE
     556 010732
                    004767
                              002656
                                                                        PC.ERR20
                                                                                            OUT OF RANGE
     557 010736
                    000414
                                                             BR
                                                                        BUFCX.
                                                                                            :EXIT-
         010740
                    012767
                              000001
                                         167212-
                                                   3$
                                          Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3
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R0 M1110 27-MAR-80 13:39 PAGE 12-1 Approved For Release 2005/07/11 CIA-RDP85-00514R000200020001-3 TMA IN 560 010746 561 562.010754 563 010760 564 010764 012767 000003 - 167206 MOV: #3.RSPCNT. ; NUMBER · OF · SEGMENTS · (FOR · PROMPT) 011666 062706 000241 (SP).4(SP) #4.SP :MOVE-RETURN-ADDRESS-:ADJUST-SP-(FOR-MEM-LIMITS) 000004 MOV: 000004 ADD: 565 010766 566 010770 567 010774 568 011000 569 011002 BUFXX (SP),4(SP) #4,SP 000405 BR :RETURN 011666 062706 000261 000004 MOS BUFCX: 000004 ADD. SEC RTS 000207 BUFXX: PC-

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TMAIN . MACRO M1110 27-MAR-80 13:39 PAGE 13
                                           Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
     572
                                                               SET-UP-BEFORE PROMPTING ON ANY 'LD' COMMAND OR BEFORE EXECUTING ANY 'PR' COMMAND FOR NON-FSA MEMORIES, THE FIELDS SET-UP HERE ARE USED IN THE TMAIN PROMTPING
     573
     574
                                                               SUBROUTINE PDATA AND THE PRINT ROUTINE PRDATA.
                                                               INPUT:
                                                               2(SP)
                                                                         LOAD/PRINT.START.ADDRESS
LOWER.MEMORY.LIMIT.
UPPER.MEMORY.LIMIT.
     588
                                                               4(SP)
     581
                                                               6 (SP)
                                                                         - TD CONTROL REGISTER BIT SETTING
     583
     584
                                                               OUTPUT:
                                                               UNCVAL. - VALUE.BY.WHICH.MEMORY.ADDRESS.INCREMENTS.
MEND. - ADDRESS.OF.LAST.WORD.IN.MEMORY.TO.BE.LOADED/PRINTED.
RSPCNT. - NUMBER.OF.WORDS.TO.EXPECT.IN.COMMAND.LINE.(MEMORY.WIDTH)
     585
     586
     587
     588
     589
                                                               C-BIT-CLEAR
                                                                                    NO ERROR (START ADDRESS IS IN RANGE)
     590
                                                               C-BIT SET
                                                                                    ERROR · IN · RANGE
     591
     592
                                                               MEMORY.
                                                                                    INCVAL
                                                                                                         RSPCNT.
     594
                                                               IB
     595
                                                               OB
                                                                                    2
     596
     598
     599 011004
                    012767
                               000002 167146
                                                    BUFS2:: MOV
                                                                          #2, INCVAL
                                                                                               ;BUFFERS INC-BY-2
     600 011012.
                    000403
                                                               BR
                                                                         SET
     601 011014
                    812767
                               000001
                                        167136
                                                     BUFSET:: MOY
                                                                                               ;BUFFERS INC.BY.1
     602
     603 011022 012767
                               000000
                                                                         #0.TD$SW
                                          176376
                                                               MOV.
                                                     SET:
                                                                                               ; RESET: TD
     604 011030
                    016767
                                166762
                                                               MOV
                                                                         APLACE,TD$CTW.
                                                                                              ; SET - TD - CONTROL - REG -
     605
                                                               IF THE FIELD MEND IS NOT = -1, THEN A LD OR PR' ROUTINE HAS PUT A MEMORY UPPER LIMIT IN THIS FIELD. EG. A COMMAND SUCH AS:
     606
     607
     688
     609
     610
                                                               WOULD PUT 10 IN THE FIELD MEND.
     612-011036
                    022767
                                                               CMP
                                                                          #-1.MEND
                                                                                               :MEMORY-END-ADDR-SET-UP-
     613 011044
                    001003
                                                               BNE
                                                                         10$
                                                                                              ;YES:
:SET:END ADDR: = MEMORY-UPPER LIMIT:
:IS:LOAD ADDRESS:IN RANGE (LOW)
     614 011046
                     016667
                               000004
                                          167192
                                                               MOV-
                                                                          4(SP),MEND
                     026766
     615 011054
                               167072
                                          000002
                                                     10$:
                                                               CMP
                                                                         MSTRT, 2(SP)
     616 011062
                     103003
                                                               BHIS
                                                                                              OK, CONTINUE
OUT OF RANGE
                                                                          1$
     617
                                                                                                                                  \tilde{\mathcal{T}}
          011064
                     BB4767
                               002530
                                                               JSR.
                                                                         PC.ERR19
     618 011070
                     000446
                                                               BR
                                                                         BUFCX2
     619 011072
                     026766
                               167060
                                          000004
                                                               CMP
                                                                         MEND,4(SP)
                                                                                               ; IS-ADDR IN-RANGE-(HIGH)
                     101403
     620 011100
                                                               BLDS
                                                                                              ;YES, CONTINUE
;OUT OF RANGE
                                                                         2$
     621 011102
                                                                         PC,ERR20
                     004767
                               002506
                                                               JSR-
     622-011106
                    000437
                                                                         BUFCX2
                                                               BR
     623 011110
                     026767
                               167036
                                          167040
                                                    2$:
                                                               CMP
                                                                         MSTRT, MEND
                                                                                               : IS - START - ADDR - LOWER - THAN - END - ADDR
                    101403
004767
     624 011116
                                                               BLOS
                                                                         3$
                                                                                              YES, CONTINUE OF RANGE
     625 011120
                               002470
                                                               JSR
                                                                         PC.ERR20
     626 011124
                    000430
                                                               BR
                                                                         BUFCX2.
                                                                                              :EXIT
     627
                                           Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3
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TMA IN	M-0.M	1110 27	-MAR-80	13:39 P	AGE: 13-1		_ ,	week and the state of the state
				Approv	ed For R	elease 20	005/07/1 3 CIA-RD	P85-00514R000200020001-3
	011126 011134	032767 001013	000001	167024	3\$:	BII:	#1,INCVAL: 5\$:IS-MEMORY ADDR INCREMENT EVEN :NO. ANY START ADDR IS OK
	011136 011144	032767 001004	000001!	167006		BIT. BNE	#1.MSTRT	:IS-START ADDRESS EVEN: :NO. ERROR:
	011146 011154	032767 001403	000001;	167002		BIT. BEQ.	#1.MEND	:IS END ADDRESS EVEN :YES, CONTINUE
635	011156 011162	004767 000411	002416		4\$;	JSR. BR	PC.ERR23 BUFCX2	
636					;			— 13 4 ., 1
638 639 640	011202	012767 011666 062706 000241	000001 · 000004 000004 ·	166770	5\$:	MOV: MOV: ADD: CLC:	#1,RSPCNT (SP),4(SP) #4,SP	:NUMBER.OF.SEGMENTS.(AOR.PROMPT). :MOVE.RETURN.ADDRESS. :ADJUST.SP.(FOR.MEM.LIMITS)
642	011204 011206	000405 011666	000004:		BUFCX2:	BR MO' _{''} '	BUFXX2 (SP),4(SP)	:RETURN.
	011212. 011216	062706 000261	000004			ADD: SEC:	#4,SP	and the same of th
645	011220	000207			BUFXX2:	RTS:	PC:	

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TMAIN MACRO M1110 27-MAR-80 13:39 PAGE 14
                                          Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
     647
     648
     649
                                                              LOAD CONTROL FOR FSA'S
     650
651
                                                              INPUT:
     652
                                                                       - VALUE BY-WHICH-MEMORY-ADDRESS-INCREMENTS
- MEMORY-START ADDRESS-
- MEMORY-END-ADDRESS-
                                                              INCVAL -
     653
     654
                                                             MEND - MEMURY: END HIDRESS

DATA1. DATA2. DATA3 - SET UP BY ROUTINE PDATA **
#RP-FLAG - DETERMINES WHETHER TO REPEAT PROMPT

#LOOP-FLAG - DETERMINES WHETHER TO LOOP ON LOAD
     655
     657
     658
     660 011222
                                                   LDCNTL::
                                                                                             661 011222
662-011230
                     032767
                               000200
                                         166564
                                                              BIT
                                                                        #RP,BASE
                     001424
                                                              BEQ
                                                                        2$
     663 011232
                     004767
                               000144
                                                                        PC.PDATA
                                                              JSR
                                                                        CHTLX-
     664 011236
                     103460
                                                              BCS
     665 011240
                     102457
                                                              BVS
     666 011242
                     016767
                               166706
                                         176362
                                                              MOV
                                                                        MSTR2,TD$TAW
                                                                                             : MOVE - ADDR - TO- TRANSFER - REG -
     667 011250
                     016767
                               166724
                                         176364
                                                                        DATA1.TD$TDW
DATA2.TD$TDW
DATA3.TD$TDW
                                                              MOV
                                                                                             :MOVE ŠĖG 1
     668 011256
                     016767
                               166720
                                         176364
                                                              MOV
                                                                                             :MOVE SEG 2 : MOVE SEG 3 : ADVANCE ADDRESS
     669 011264
670 011272
                     016767
                               166714
                                         176364
                                                              MOV
                    866767
                               166662
                                         166654
                                                              ADD
                                                                        INCVAL, MSTR2
          011300
                     000754
                                                                                             : REPEAT.
     672
     673 011302
674 011306
                     004767
                               000074
                                                              JSR
                                                                        PC.PDATA
                                                                                             :PROMPT ONCE
:END OF MEMORY DRYERROR
                     103434
                                                              BCS
                                                                        CHTLX-
          011310
                     102433
     675
                                                                                             :<CR> RESPONSE TO PROMPT.
SET UP TRANNSFER ADDRESS
                                                              BVS
                                                                        CHTLX-
                                                                        MSTR2.TD$TAW
DATA1.TD$TDW
          011312
                     016767
                               166636
                                        476362
                                                   3$:
                                                              MOV
                                                                                             :MOVE · SEG · 1
:MOVE · SEG · 2
     677
          011320
                     016767
                               166654
                                         176364
                                                              MOV
     678 011326
                     016767
                               166650
                                         176364
                                                              MOV
                                                                        DATA2.TD$TDW
     679
          011334
                     016767
                               166644
                                         176364
                                                              MOV
                                                                        DATA3, TD$TDW
                                                                                             :MOVE-SEG-3
     680 011342
                     066767
                               166612
                                         166684
                                                              ADD
                                                                        INCVAL, MSTR2
                                                                                             :ADVANCE ADDRESS
          011350
                     026767
                               166600
                                         166600
                                                              CMP
                                                                        MSTR2, MEND
                                                                                             :HAS · UPPER · MEMORY · LIMIT · BEEN REACHED ·
     682 - 011356
                     101755
                                                              BLOS
                                                                        3$
                                                                                             :NO, CONTINUE.
     683 011360
                     032767
                               000004: 166426
                                                              BIT
                                                                         #LOOP, BASE
                                                                                             :LOOP ON ?
     684 011366
                     001404
                                                              BEU
                                                                        CHTLX-
                                                                                             :NO, EXIT.
          011370
                     016767
                               166556: :166556
                                                              MOV
                                                                        MSTRT, MSTR2
                                                                                             :REINITIALIZE ADDRESS
          011376
                                                                        3$
     687
     688
          011400
                                                   CNTLX:
     689 011400
                     000207
                                                                        PC.
                                                              RTS
```

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TMA IN
              O-M1110 27-MAR-80 13:39 PAGE-15
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     691
     692
                                                             PROMPTING CONTROL FOR LOADING ALL MEMORIES AND BUFFERS, READ NUMERIC DATA FROM THE COMMAND LINE, CONVERT AND STORE INTO A COMMON BUFFER, EG. IF THE INITIATING COMMAND IS:
     693
     694
                                                             >LD-AM-0
THIS-ROUTINE WILL-PUT-OUT-A-PROMPT-AND-EXPECT-3 NUMERIC
     696
     697
                                                              VALUES IN RETURN:
     698
     699
                                                              >000000 000000 000000
                                                             THIS ROUTINE CONVERTS THESE ASCII OCTAL VALUES INTO BINARY AND STORES THEM INTO DATA1, DATA2, DATA3
     200
     29 i
     702
     703
                                                              INPUT: (SET-UP-BY-TMAIN-SUBROUTINE-BUFSET)
                                                                       - CURRENT MEMORY ADDRESS
- MEMORY UPPER ADDRESS LIMIT
                                                             MSTR2
     794
     705
                                                             MEND
                                                                        - NUMBER OF WORDS TO EXPECT IN COMMAND LINE
     706
     707
                                                             OUTPUT:
     708
                                                             WWORDS (DATA1, DATA2, DATA3) DEPENDING UPON RSPONT
     709
     710
                                                             G-BIT-GLEAR, V-BIT-CLEAR-
                                                                                                      NORMAL - RETURN -
                                                             C-BIT CLEAR, V-BIT SET
C-BIT SET, V-BIT CLEAR
     712
                                                                                                       <CR> RESPONSE TO PROMPT.
     713
                                                                                                      END.OF.MEMORY.OR.CONVERSION.ERROR
     715
                                                             REGISTERS 1, 4, 5 DESTROYED
     716
     718 011402
                                                   PDATA::
          011402
                                                             CMP
                               166546 166546
                                                                        MSTR2, MEND
                                                                                            ;UPPER · MEMORY · LIMIT · REACHED ·
      720 011410
                     101403
                                                             BLOS
                                                                        10$
                                                                                            :NO, CONTINUE
     721 011412
                    004767
                               002146
                                                              JSR
                                                                        PC.ENDMEM-
                                                                                             ; END OF MEMORY REACHED
      722.011416
                    000470
                                                                                             :SET CARRY AND EXIT
                                                             BR
                                                                        PDCX
     723
                                                                                            PREPARE TO PRINT ADDRE
      724 011420
                                                    10$:
                     016701
                               166530
                                                                        MSTR2,R1
                     012705
     725 011424
                               005654"
                                                             MOV
                                                                        #PRINT, R5
      726
          011430
                    004767
                               001672
                                                              JSR
                                                                        PC. UNPK
                                                                                             CONVERT ADDRESS ...
      727
          011434
                     004767
                               001732
                                                              JSR.
                                                                        POLCONSOL:
                                                                                             :PRINT.OUT.ADDRESS
      728
                                                                        #20040.GCMBLK+G.DPRM :ERASE CR+LF
      729
          011440
                     012767
                               020040
                                                              MOV
                                                                        #15.GCMBLK+G.DPRM+; RESTORE CR+
#12.GCMBLK+G.DPRM+; RESTORE CF+
#12.GCMBLK+G.DPRM+1 ; RESTORE LF+
PC.FIND+ ; LOCATE FIRST DATA WORD+IN+COMMAND+LINE+
      730 011446
                     004767
                               001036
                                                              JSR.
      731 011452
                     112767
                               000015
                                         1176314
                                                              MOVB
                               000012
          011460
                     112767
                                         176307
                                                              MOVB
      733 011466
                     004767
                               001406
                                                              JSR
      734 011472
                     103437
                                                              BCS
                                                                        PDVX
                                                                                             :<CR> RESPONSE, EXIT-
      735
          011474
                     012705
                                                              MOV:
                               000200*
                                                                        #WWORDS,R5
                                                                                             : WORDS FROM COMMAND LINE GO INTO THIS TABLE
                                                                                            :NUMBER OF WORDS TO EXPECT.
      737
          011500
                     016704
                               166456
                                                              MOV.
                                                                        RSPCHT, R4
      738 011504
                     994767
                               001506
                                                    2:5
                                                              ISR
                                                                        PC.PACK.
                                                                                            CONVERT WURD TO BENNEY
OK CONTINUE
'OK CONTINUE
'INVALUE NUMBERIC' VALUE
'MOVE VURD TO TABLE
'MOVE WORD TO TABLE
          011510
                     103003
      739
                                                              BCC
                                                                        3$
      740
          011512
                                                                        PC.ERR4
                     004767
                               002176
                                                              JSR
      741
          011516
                     000430
                                                              BB
                                                                        PNCX
      742 - 011520
                     016725
                                                                        BINWD,(R5)+
                               166266
                                                   3$:
                                                              MOV
                                                                                             ;SUB FROM LOOP COUNT
      743 011524
                     005304
                                                              DEC
                                                                        R4
      744 011526
                     001427
                                                              BEQ
                                                                        PDCCX-
                                                                                             :FINISHED
      745 011530
                     004767
                               001344 -
                                                              JSR
                                                                        PC,FIND
                                                                                             :FIND · NEXT · WORD
      746
          011534
                     103003
                                                              BCC
                                                                        4$
                                                                                             :OK, CONTINUE
                               002156
          011536
                     004767
                                          Approved For Release 2005/07/123: CIA-RDP85-00514R000200020001-3
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T1 28 711 115 M. M. M. M.						, '
TMAIN MACRO	⊩Mili0 27-MAR-					1.7
		aqA	roved For Releas	se 2005/07/12 : C	CIA-RDP85-00514R00	00200020001-3

748 011542 749	000416			BR	PDCX	
750 011544 751 011550 752 011552 753 011556 754 011562 755 011564 756 011570	022704	000122 166234 000001 166222	, 4\$:	CMPB BNE MOV CMP BEQ MOV BR	#'R,(R1) 2\$ BINUD,(R5)+ #1.R4 PDCCX- BINUD,(R5)+ PDCCX-	REPEAT PATTERN (FSA(S ONLY) (FT) NO WRITE BAME PATTERN TO NEXT SEG ALREADY FILLED LAST SEG YES, EXIT
757 758 011572 759 011574 760 011576 761 011600	000241 000262 000405 000242		; PDVX: PDCX:	CLC: SEV: BR CLV:	PDDX	:INDICATE <cr> RESPONSE</cr>
762 011602 763 011604 764 011606 765 011610 766 011612	000402 000241 000242		PDCCX:	SEC: BR CLC: CLV: RTS:	PDDX PC·	; INDICATE ENDOOF MEMORY REACHED

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TMA IN
    768
    769
779
771
772
773
774
                                                           PRINT CONTROL FOR FSA'S
                                                           FIELDS ALREADY SET UP BY BUFFSA:
                                                           INPUT:
                                                           MSTR2 -
                                                                    - MEMORY ADDRESS
                                                                    - MEMORY END ADDRESS
                                                           MEND.
                                                           #LOOP.FLAG. - REPEAT.MEMORY.READ
    776
777
778
779
                                                           OUTPUT:
     780
                                                           DATA1, DATA2, DATA3 (INPUT.TO.ROUTINE.PRDATA)
     782
     783 011614
                                                 PRCNTL::
                                                                                        ; MOVE \cdot ADDR \cdot TO \cdot TRANSFER \cdot REG ; MOVE \cdot SEG \cdot 1
     784 011614
                    016767
                             166334
                                       .176362 -
                                                 15:
                                                           MOV
                                                                    MSTR2,TD$TAW
TD$TDR,DATA1
     785 011622
                   016767
                              176374
                                       166350
                                                           MOV
         011630
                    016767
                              176374
                                       166344
                                                           MOV
                                                                     TD$TDR,DATA2
                                                                                        :MOVE - SEG - 2 -
     787 011636
                    016767
                              176374
                                       166340
                                                           MOV.
                                                                     TD$TDR,DATA3
                                                                                         :MOVE - SEG - 3
     788 011644
                    004767
                             000040
                                                           JSR
                                                                     PC,PRDATA
                                                                                         :PRINT : MEMORY : CONTENTS
     789
                                                                                        :ADVANCE ADDRESS::HAS-UPPER-MEMORY-LIMIT BEEN REACHED
     790
         011650
                    066767
                              1663041 166276
                                                                     INCVAL, MSTR2
                   026767
101753
     791 011656
                              166272
                                       166272
                                                           CMP
                                                                     MSTR2, MEND
     792-011664
793-011666
                                                           BLOS
                                                                     1$
                                                                                         :NO, CONTINUE.
                                                                     #LOOP, BASE
                                                                                        :LOOP
                    032767
                             000004: 166120
                                                           BIT.
     794 011674
                    001404
                                                                                        :NO. EXIT
:REINIT START ADDRESS
                                                           BEQ.
                                                                     PCHTLX-
     795 011676
796 011704
                    016767
                              166250: 166250
                                                           MOV-
                                                                     MSTRT, MSTR2
                    000743
                                                           BR
                                                                     1$
                                                                                        :AND REPEAT
     798 011706
799 011706
                                                 PCNTLX:
                    000207
                                                           RTS
                                                                     PC:
```

P. L. . . .

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1 1
                                                                                                      3
TMA IN
          MACRO-M1110 27-MAR-80 13:39 PAGE-17
                                              Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
     802
     803
                                                                   COMMON-PRINT ROUTINE.
                                                                   THIS ROUTINE CONVERTS VALUES IN THE FIELD WWORDS TO
     804
     805
                                                                   ASCII.OCTAL (DEPENDING ON RSPCNT) AND PRINTS THEM (TTO)
     806
     807
                                                                   INPUT:
                                                                                         - WHEN LOOP.OPTION.IS.IN.EFFECT, PRINT.1 WORD.ONLY.
- CONTROL.PRINTING.OF.1 WORD WHEN #OUT.IS.SET.
- NUMBER.OF.WORDS.TO.PRINT (SEE.*BUFSET* RTN)
- MEMORY.ADDRESS (SEE.*BUFSET*)
- MEMORY.WORDS.(DATA1, DATA2, DATA3, DATA4)
                                                                   #OUT FLAG
     809
                                                                   #ONCE · FLAG ·
     810
                                                                   RSPONT:
     811
                                                                   MSTR2
     812
     813
                                                                   REGISTERS 1, 3, 4, 5 DESTROYED
     814
     815
     816
     817
           011710
                                                        PRDATA:
     818 011710
819 011716
                      032767
                                 002000
                                            166076
                                                                   BIT
                                                                               #OUT, BASE
                                                                                                     ;OUTPUT · CONTROL · ON
                                                                                                     ;NO, SKIP-OUTPUT-CONTROL
;ONE-LINE-PRINTED-
                      001407
                                                                   BEQ.
                                                                               105
     820 011720
                      032767
                                                                   BIT
                                                                               #OHCE, BASE
                                  000010: 166066
     821 011726
                      001026
                                                                              PRDX
                                                                                                     :YES, EXIT.
                                 000010 166056
     822-011730
                      052767
                                                                   B13
                                                                               #ONCE, BASE
                                                                                                     :SET-FLAG-FOR-NEXT TIME
      823
     824 011736
825 011742
826 011746
                                                                                                     :FIRST CONVERT ADDRESS TO ASCII.
                      016701
                                                        10$:
                                                                   MOV
                                                                              MSTR2,R1
                      012705
                                 0056541
                                                                   MOV-
                                                                               #PRINT, R5
                      004767
                                 001354
                                                                   JSR.
                                                                              PC,UNPK.
                                                                                                     :PERFORM CONVERSION
      827
                                                                                                     :POINT TO WORDS FOR PRINTING
:NUMBER OF MEM WORDS TO PRINT
:ADVANCE PRINT LINE POINTER
      828-011752-
                      012704
                                  0002001
                                                                               #WWORDS,R4
                                                                   MOV
      829 011756
830 011762
                      016703
062705
                                                                              RSPCNT,R3
#2,R5
(R4)+,R1
                                  166200
                                                                   MOV-
                                  000002
                                                        15:
                                                                   ADD
           011766
                       012401
                                                                   MOV
                                                                                                     :LOAD ONE WORD :: CONVERT IT TO ASCII
      832-011770
833 011774
834 011776
                      004767
                                  001332
                                                                    JSR
                                                                               PC. UNPK
                      005303
001371
                                                                   DEC
BNE
                                                                              RЗ
                                                                                                     :DEC:WORD:COUNT
                                                                                                     :REPEAT.
:PRINT.LINE.
                                                                               15
      835 012000
                       004767
                                  001366
                                                                    JSR
                                                                              PC,CONSOL
      836
837
           012004
                                                        PRDX:
                      000207
                                                                   RTS
                                                                              PC
```

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0 M1110
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839
849
841
                                                              CALCULATE 8-BIT BYTE OFFSET INTO 6 BIT BYTE TABLE.
842
843
                                                              INPUT:
                                                                            *CHANGE: OR *END: VALUE FROM COMMAND LINE
844
845
                                                                              (= OFFSET · INTO · 6-BIT · BYTE · TABLE)
846
847
                                                              OUTPUT:
                                                                             8-BIT-BYTE-OFFSET-INTO-6-BIT-BYTE-TABLE-
FOUR-6-BIT-BYTES-FIT-IN-THREE-8-BIT&
BYTES: 'COUNT' REPRESENTS-THE-POSITION-
OF-A-6-BIT-BYTE-WITHIN-THE-THREE-8-BIT-
BYTES: POSITIONS-ARE-0, 1, 2, 3.
848
                                                              OFF6
                                                              COUNT
850
851
852
853
854
                                                              TO GET-THE-OFFSET-VALUE, MULTIPLY-THE-BINUD-(6-BIT-LOCATION) VALUE-BY-3, THEN-DIVIDE-BY-4, TO GET-THE-POSITION, SUBTRACT-THE REMAINDER FROM-THE-DIVISION.
855
856
857
                                                              FROM: 4.
858
859
860 012006
                                                   OFFSET::
861 012006
                 005767
                                                              TST
                                                                         BINWD
                                                                                                ;CHECK · FOR · VALUE · =™0
                                                                                                862-012012
                 001005
                                                              BNE
                                                                          1$
863 012014
                                                                         ÖFF6
                 005067
                            166154
                                                              CLR
864 012020
                 005067
                            166142
                                                              CLR
                                                                         COUNT
                                                                                                START AT FIRST BIT POSITION
865 012024
                 000422
                                                              BR
                                                                          2$
866
     012026
867
                 016701
                            165760
                                                   1$:
                                                              MOV
                                                                         BINUD, R1
                                                                                                :PREPARE FOR MULT
868 012032
869 012036
                 012700
                            000003
                                                              MOV
                                                                         #3.,R0
PC,$MUL
                                                                                                :MULTIPLIER:
:MULT VALUE BY 6
                 004767
                            000000G
                                                              JSR
     012042
                 010100
                                                              MOV
                                                                         R1.R0
                                                                                                :MOVE PRODUCT TO RØ FOR DIVIDE
                                                                                               DIVISOR IN R1

GET NUMBBER OF 8-BIT BYTES

SAVE OFFSET INTO TABLE

PREPARE TO CALCULATE POSITION.
871 012044
                 012701
                            000004-
                                                              MOV
                                                                         #4.,R1
PC,$DIV
872-012050
873 012054
                 004767
                            000000G
                                                              JSR
                 010067
                            166114
                                                              MOV
                                                                         R0.OFF6
874 012060
                 012702
                            000004
                                                              MOV
                                                                         #4.,R2
875 012064
                 160102
                                                                         R1.R2
                                                                                                SUB REMAINDER FROM ABOVE DIVISION
                                                              SUB
876
877
     012066
012072
                 010267
                             166074
                                                              MOV
                                                                         R2,COUNT
                                                                                                                              \mathbb{N}_{n}
                 000207
                                                   2$:
                                                              RTS
```

TMAIN.

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TMAIN: MACRO:M1110 27-MAR-80 13:39 PAGE:19
                                                Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
     879
     888
                                                                      BUILD-6-BIT-BYTE-'DATA' BUFFER-
PROCESS ONE-COMMAND-LINE'S-WORTH OF-8-BIT-BYTES.
CONVERT-THEM TO-6-BIT-BYTES-AND-ADD-THEM-TO-THE-
6-BIT-BYTE-TABLE. ALSO SAVE-THE-8-BIT-BYTES-IN-
THEIR-CURRENT-FORM-FOR USE-BY-'LI' COMMAND.
     881
      882
     884
     885
      886
      887
                                                                       INPUT:
                                                                                  - LENGTH-OF-COMMAND-LINE
                                                                      GCMLEN.
      888
                                                                                     6-BIT-BYTE-POSITION (SEE-ROUTINE *OFFSET*)
     889
                                                                      COUNT:
     890
                                                                      R1
                                                                                  - POINTER . TO . COMMAND . LINE .
                                                                                  - POINTER TO 6-BIT BYTE TABLE - POINTER TO 8-BIT ASCII MIRROR IMAGE OF COMMAND
      891
                                                                      R4
      892
      893
                                                                                     LINE · INPUT · TABLE ·
      894
                                                                      OUTPUT:
      895
                                                                      DPLUS - NUMBER OF 6-BIT CHARACTERS ADDED 470 6-BIT **
BYTE TABLE IN CURRENT CALL OF DBLD.
      896
      897
      990
      900 012074
                                                           DBLD::
      901
           012074
                       016767
                                   166842 16687R
                                                                      MOV:
                                                                                  GCMLEN, DPLUS
                                                                                                         ; NUMBER - OF - CHARS - IN COMMAND - LINE -
                                                                      THE STRINGS <12> AND <15> ARE ALLOWED IN THE COMMAND LINE FOR THE ENTERING OF CARRAIGE RETURNS AND LINE FEEDS. A CARRIAGE RETURN IS SAVED IN THE MIRROR TABLE AS A BINARY 15. A LINE FEED AS A BINARY 12. THE BRACKETS ARE RE-INSTATED BY THE LI COMMAND FOR PRINTING.
      993
      984
      905
      986
      987
      908
      909
           012102
                        121127
                                                                      CMPB
                                                                                  (R1),#*<
                                                                                                          :LOOK.FOR.<15> OR.<12>:NO.ADJUSTMENT.NEEDED.
                                   000074
                                                           DBLD1:
      910
           012106
                        001047
                                                                      BHE
      911 012110
912 012116
                        126127
                                   0000033 000076
                                                                       CMPB
                                                                                   3(R1),#1>
                                                                                                          :ARE-BRACKETS-CLOSED-
:NO. TREAT-BRACKET AS-CHAR-(INVALID)
                        001043
                                                                      BNE
                                                                                  HOCRLF -
      913 012120
                        126127
                                   000001 000061
                                                                       CMPB
                                                                                   1(R1),#11
                                                                                                          :FIRST-CHAR-OF-12-OR-15
      914 012126
915 012130
916 012134
                        001403
                                                                       BEQ
                                                                                   1$
                                                                                                          OK, CONTINUE:
ILLEGAL 'DATA' CHARACTER
                        004767
                                   001454
                                                                       JSR
                                                                                  PC.ERR21
                        000557
                                                                                  DBLDSX-
      918
                                                                      PARSE - THE - SECOND - OF - THE - 2 - CHARS - BETWEEN - THE - BRACKETS
      919
      920 012136
921 012142
922 012150
                        912792
                                   000010
                                                                                                          START WITH BINARY 10
                                                           1$:
                                                                      MOV
                                                                                   #10.R2
                        126127
                                   000002 000062
                                                                      CMPB
                                                                                  2(R1),#12
                                                                                                          :LINE · FEED ·
                        001003
                                                                       BNE
                                                                                  2$
                                                                                                          ;NO, TRY CR:
;MAKE:R2 =:12.
      923 012152
924 012156
                        862782
                                   000002
                                                                                   #2,R2
                                                                       ADD
                        000411
                                                                       BR
                                                                                   4$
      925 012160
                        126127
                                                                       CMPB
                                                                                  2(R1),#:5
                                   000002
                                              000065
                                                                                                          ; CARRAIGE · RETURN
      926 012166
927 012170
928-012174
                        001403
                                                                       BEQ.
                                                                                   3$
                                                                                                          ;OK, CONTINUE:
;ILLEGAL 'DATA' CHARACTER:
                                                                                  PC, ERR21
                        004767
                                   001414
                                                                       JSR
                        000537
                                                                                  DBLDSX-
      929
      939
                                                                      MOVE · BINARY · VALUE · TO · MIRROR · TABLE ·
      931
                                                                                       932-012176
                       062702
                                   000005
                                                           3$:
                                                                      ADD.
                                                                                   #5,R2
     933 012202
934 012204
935 012210
                       110225
062701
                                                           4$:
                                                                      MOVB
                                                                                  R2, (R5)+
                                   000004
                                                                      \mathtt{ADD} \cdot
                                                                                   #4.R1
                        162767
                                   000003
                                               165724
                                                                       SUB
                                                Approved For Release 2005/07/12
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TMA IN-
              0.M1110
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    936 012216
                   162767
                                                          SUB
                                                                   #3,DPLUS
                                                                                      ;ADJUST-'DATA: CHAR-COUNT-FOR-THIS LINE
    937
         012224
                   000412
                                                          BR
                                                                   MOVTR
    938
    939
                                                          MOVE CHARACTER FROM COMMAND LINE TO MIRROR TABLE
    940
    941 012226
                                                NOCRLF:
    942 012226
                   111125
                                                          MOVE
                                                                   (R1)_{*}(R5) +
                                                                                       :MOVE.CHAR.TO.ASCII SAVE.BUFFER.
         012230
                   022705
                            0050461
                                                          CMP -
                                                                   #DSEND,R5
                                                                                      :END OF BUFFER REACHED
    944 012234
                   002005
                                                          BGE
                                                                   1$
    945 012236
                   994767
                             001322
                                                          JSR
                                                                   PC.ENDMEM
                                                                                       : ISSUE - MESSAGE
     946 012242
                   105067
                             172600
                                                          CLRB
                                                                   DSEND:
                                                                                       :CLEAR LAST BYTE OF TABLE
     947 012246
                   000512
                                                                   DBLDSX
                                                                                      :AND EXIT
     948 012250
                   112102
                                                1$:
                                                          MOVB
                                                                   (R1) + R2
                                                                                       ;LOAD CHAR FROM COMMAND LINE
     949
     950
                                                          TRANSLATE CHARACTER FROM COMMAND LINE INTO 6-BIT EQUIVALENT
     951
     952 - 012252 -
                                                MOVIE:
     953 012252
                   116202
                             005050
                                                          MOVB
                                                                   TR6TBL(R2).R2.
                                                                                      :LOAD 6-BIT CHAR
     954 012256
                   002003
                                                          BGE -
                                                                                      ;VALID CHAR, CONTINUE
;ILLEGAL 'DATA' CHARACTER
                                                                   10$
                                                                   PC,ERR21
     955 012260
                   004767
                             001324
     956 012264
                   000503
                                                                   DBLDSX-
                                                          PUT-6-BIT-CHARACTER-INTO-TABLE-
TAKE-INTO-ACCOUNT-'POSITION'. 4 6-BIT-BYTES-FIT-INTO
3 8-BIT-BYTES: POSITIONS-ARE-0, 1, 2, 3.
     958
     959
     968
     961
                                                          POSITION:
                                                          0
                                                                   00000000 00000000 00111111
00000000 00001111 11000000
     963
     964
                                                                   00000011 11110000 00000000
     965
                                                                   11111100 00000000 00000000
     966
     967
                                                          POSITION · Ø
     968
         012266
     969
                   010203
                                                10$:
                                                          MOM
                                                                   R2,R3
                                                                                       ; COPY FOR LATER USE
         012270
                   005767
                             165672
                                                          TST
                                                                   COUNT
                                                                                       ;POSITION = 0
     971 012274
                   001004
                                                          BNE
                                                                   1:5
                                                                                       :NO, TRY 1
     972-012276
973 012302-
                                                                                      CLEAR AHEAD OF BIT SET
                   142714
                             000077
                                                          BICB
                                                                   #077,(R4)
                   150314
                                                          BISB
                                                                   R3.(R4)
     974 012304
                   000464
                                                          BR
                                                                   MEXTD.
                                                                                       #GET - NEXT - CHAR
     975
     976
977
                                                          POSITION-1
     978 012306
979 012314
                   122767
                             000001
                                      165652
                                                          CMPB
                                                1$:
                                                                   #1,COUNT-
                                                                                       :POSITION -= - 1
                   001022
                                                          BNE
                                                                                       :NO. TRY 2:
:CLEAR TOP 4 BITS OF 6-BIT CHAR (00111100)
                                                                   2$
     980 012316
                   142703
                             000074
                                                          BICB
                                                                   #074,R3
         012322
                   006303
                                                                   R3
R3
                                                          ASL -
                                                                                       SHIFT 2 BITS LEFT 6
    982 012324
983 012326
984 012330
985 012332
                                                          ASL
                   006303
                                                                   R3
R3
                   006303
                                                          ASI.
                   006303
                                                                   R3
                                                          ASL
                                                                                                                           180
         012334
012336
                   006303
142714
     986
                                                                   R3
                                                          ASL
                                                                                       CLEAR AHEAD OF BIT SET INCREMENT
     987
                            000300
                                                          BICE
                                                                   #300,(R4)
     988 012342
                   150324
                                                          BISB
                                                                   R3.(R4) +
    989
    990 012344
                                                                                      :LOAD ORIGINAL CHAR:
:LEAVE 4 BITS OF 6-BIT CHAR
                   010203
                                                          MOV-
                                                                   R2,R3
    991 012346
                   006203
006203
                                                          ASR
                                                                   R3
     992.012350
                                                          ASR.
                                       Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
```

### MACRO MILLIO 27-MAR-80 13:39 PAGE 19-2 ### Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3 ### Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3 ### Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3 ### Approved For Release 2005/07/12 : CIA-RDP85-00514R0000200020001-3 ### Approved For Release 2005/07/12 : CIA-RDP85-00514R000020002001-3 ### Approved For Release 2005/07/12 : CIA-RDP85-00514R000020002001-3 ### Approved For Release 2005/07/12 : CIA-RDP85-00514R000020002001-3 ### Approved For Release 2005/07/12 : CIA-RDP85-00514R00002002001-3 ### Approved For Release 2005/07/12 : CIA-RDP85-00514R00002002001-3 ### Approved For Release 2005/07/12 : CIA-RDP85-00514R00002002001-3 ### Approved For Release 2005/07/12 : CIA-RDP85-00514R0000200201-3 ### Approved For Release 2005/07/12 : CIA-RDP85-00514R0000001-3 ### Approved For Release 2005/07/12 : CIA-RDP85-00514R0000001-3 ### Approved For Release 2005/07/12 : CIA-RDP85-00514R0000000000000000000000000000000000							•	, (
994 812356 158314	TMAIN MACRO N	11110 27	'⊷MAR-80				:005/07/12 : CIA-	RDP85-00514R000200020001-3
997 998 999 812362 822767 8080802 165576 2 \$: CMP	994 012356 995 012360	150314	000017 ⁻	·		BISB.	R3.(R4)	:'OR' IN 6-BIT CHAR
999 012362 02276 080002 165576 2\$: CMP #2.COUNT 11S.PASS COUNT = 2 1808 012370 0801022 080503 080060: BHCB #660.R3 102400 080503	997					POSITI	0N · 2 ·	
1886 812496	999 012362 1000 012370 1001 012372 1002 012376 1003 012400 1004 012402	001022 142703 006303 006303 006303				BNE BICB ASL ASL ASL	3\$ #060.R3 R3 R3 R3	;NO, TRY 3 ;CLEAR-2 BITS-(00110000)
1809 812414 818283	1006 012406 1007 012412	142714	000360			BICB:	#360,(R4)	
1016 012434 000410	1009 012414 1010 012416 1011 012420 1012 012422 1013 012424 1014 012426	006203 006203 006203 006203 142714	000003		;	ASR ASR ASR ASR BICB	R3 R3 R3 R3	:SHIFT 4 BITS-RIGHT-4 :CLEAR-AHEAD-
1018	1016 012434						R3.(R4) NEXTD	; OR: IN PART-OF-6-BIT-CHAR.
1020 012436 006303 3\$: ASL R3 ;SHIFT 6 BITS LEFT 2	1018					POSITI	ON · 3	
1025	1020 012436 1021 012440 1022-012442 1023 012446 1024 012450	006303 · 142714 150324		165510	, 3 \$:	ASL BICB BISB	R3 #374,(R4) R3,(R4)+	CLEAR AHEAD COR' IN 6 BITS
1030 ; 1031 012474 005067 165470 DBLDSX: CLR DATALN ;AS THOUGH RTN WAS NOT ENTERED 1032 012500 000261 SEC 1033 012502 000401 BR DBLDXX: CLC 1035 012506 000207 DBLDXX: RTS PC	1026 012456 1027 012462 1028 012466	005367 001406	165454	:	; NEXTD:	DEC: BEQ:	GCMLEN DBLDCX	: BUMP · 6 - BIT · BYTE · COUNTER. : DEC · BYTE · COUNTER / (· · ·
1033 012502 000401 BR DBLDXX ;AND EXIT 1034 012504 000241 DBLDXX: CLC 1035 012506 000207 DBLDXX: RTS PC	1030 1031 012474	005067				CLR.	-	
1035 012506 000207 DBLDXX: RTS: PC:	1033 012502	000401			DOLDOV-	BR	DBLDXX:	;AND·EXIT·
							PC·	

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13:39 PAGE 20 Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
TMA IN .
    1037
    1038
                                                                  GET - COMMAND - LINE - FROM - TERMINAL -
    1039
    1040
                                                                  OUTPUT:
    1041
                                                                  GCMBUF - WORK AREA TO HOLD COMMAND LINE : #
GCMLEN - LENGTH OF LINE READ : #
GCMPNT - POINTER TO COMMAND LINE (SET TO POINT TO BEGINNING)
    1042
    1943
    1044
    1045
                                                                  SEE: "FIND" SUBROUTINE: FOR: THE: USE: AND: UPDATING: OF: THESE: FIELDS.
    1946
     1047
     1048
    1049 012510
1050 012510
1051 012514
                                                       GCONLY::
                                                                                                   :POINT:TO:COMMAND:LINE:BUFFER:
                      012700
                                 0000201
                                                                  MOV
                                                                              #GCMBUF,R0
                      012701
                                 000120
                                                                  MOV.
                                                                              #80..R1
     1052-012520
                      112720
                                 000040
                                                                  MOVB
                                                                              #40,(R0)+
     1053 012524
                      005301
                                                                                                    :FINISHED?
     1054 012526
                      001374
                                                                  BHE
                                                                                                    :NO
     1055
           012530
012530
012534
                                                                              #GCMBLK.
#GCMBLK.R0
G.PSDS(R0)
     1056
                      012700
                                 007614
                                                                   MOV-
                      005060
                                 000142
                                                                   CLR:
           012540
                      004767
                                 000000G
                                                                  JSR:
MOV:
                                                                              PC..GCML1
                                                                             #G.CMLD(R0).GCMLEN.:SAVE LENGTH
#GCMBUF.GCMPNT - 7 INIT.COMMAND LINE POINTER
#GCMBUF.R1 :POINT R1 TO COMMAND LINE
    1057 012544
1058 012552
                      016067
                                 000146
000020*
                                            165370
                                                                   MOV.
                      012767
                                            165364
     1059 012560
1060 012564
                      012701
                                 0000201
                                                                   MOV
                      000207
```

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C. Printer and Market
TMÁIN: MACRO:rii110 27-MAR-80 13:39 PAGE 21 Approved For Release 2005/07/12: CiA-RDP85-00514R000200020001-3
    1062
    1963
    1864
                                                             PROMPT FOR LOOP ON TEST
    1065
                                                             GIVE DIRECTIONS FOR STOPPING LOOP (AND HANG QIO)
    1066
   1067
    1068
         012566
                                                   LOOPR::
    1069
         012566
                    004767
                              000306
                                                                                           :LOOK FOR LOOP OPTION CHAR IN COMMAND LINE:NOTHING THERE, EXIT::LOOP INDICATOR ?
                                                             JSR
                                                                       PC.FIND
    1070
         012572
                    103444
                                                             BC3
   1071 012574
1071 012574
1072-012600
                                                                       LOOPX:
                    122711
                              000114
                                                   1$:
                                                             CMPB
                                                                       # L. (R1)
                    001410
                                                             BEQ
                                                                       HANG
                                                                                           YES, SET LOOP FLAG:
LOOP OPTION ERROR
PROMPT FOR LOOP OPTION
    1073 012602
                    004767
                              001122
                                                             JSR
                                                                       PC, ERR1
   1074 012606
                    004767
                              001122
                                                             JSR
                                                                       PC.LPTST
PC.FIND
   1075 012612
1076 012616
                    004767
                              000262
                                                             JSR
                                                                                           ANY RESPONSE : NO LOOP AFTER ALL
                    183432
                                                             BCS
                                                                       LOOPX-
         012620
                    000765
                                                             BR
   1078
                                                                                           :CHECK RESPONSE
   1079
         012622
012630
                    052767
                              000004
                                        165164
                                                                       #LOOP,BASE.
#ASTFLG,BASE.
                                                  HANG::
                                                             BIS
                                                                                           :SET-FLAG-FOR-LOOP
:SET-FLAG-FOR-QIO-ISSUED-
:GIVE-DIRECTIONS FOR-STOPPING-TEST
   1080
                    052767
                              000020
                                        165156
                                                            BIS:
   1081
         012636
                    004767
                              000726
   1082
                                                             JSR
                                                                       PC,STOP
   1083
         012642
                                                                       #IO.ATA,#LUN.TT,,,,<
                                                            0.10$8
         012642
                    005046
                                                            CLR
                                                                      -(SP)
         012644
                    005046
                                                            CLR
         012646
                    005046
                                                            CLR
                                                                       -(SP)
         012650
                    005046
                                                            CLR
                                                                      -(SP)
         012652
                    005046
                                                            CLR
                                                                      -(SP)
         012654
                    012746
                             0127661
                                                            MOV
                                                                      #AST,-(SP)
         012660
                   005046
                                                            CLR
                                                                      -(SP)
         012662
                   005046
                                                            CLR
                                                                      -(SP)
         012664
012666
                   005046
                                                            CLR
                                                                      -(SP)
                   012746
                                                                      #LUN.TT,-(SP)
                                                            MOV
         012672
                                                                                                                                    * 4
                   012746
                             000000G
                                                            MOV-
                                                                      #IO.ATA,-(SP)
         012676
                   012746
                                                            MOV.
                                                                       (PC)+,-(SP)
         012700
                       00 i
                                 014
                                                             .BYTE
                                                                      1.12
         012702
                   104377
                                                                      ±0<377>
   1084
   1085 012704
                                                  LOOPX:
   1086
        012704
                   000207
                                                            RTS
                                                                      PC.
   1087
   1088
   1089
   1090
                                                            KILL - AST -
   1091
   1092
   1093 012706
  1094 012706
1095 012714
1096 012716
                   032767
                             000020
                                       165199
                                                            BIT
                                                                      #ASTFLG,BASE
                                                                                          :WAS AST ISSUED
                   001423
                                                           ΒEQ
                                                                      1$
                  042767
                             000020
                                       165070
                                                           BIC
                                                                      #ASTFLG,BASE
  1097
        012724
                                                           Q I O U$S
                                                                      #IO.DET,#LUN.TT
        012724
012726
                   005046
                                                            CLR
                                                                      -(SP)
                  005046
005046
        012726
012730
012732
012734
012736
                                                           CLR
                                                                     -(SP)
                                                           CLR
                                                                     -(SP)
                  005046
                                                           CLR
                  005046
                                                                                               The second second second second
                                                           CLR
                                                                     -(SP)
                  005046
                                                           CLR
                                                                     -(SP)
        012740
                  005046
                                                                                                                                      23.114
                                                           CLR
                                                                     -(SP)
                                         Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
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TMA IN-
                   0 Miii0 27-MAR-80 13:39 PAGE 21-1
Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
            012742
012744
012746
012752
012756
                                                                                 CLR -
CLR -
MOV -
                          005046
                                                                                               -(SP)
-(SP)
                          005046
012746
012746
                                        000001
000000G
                                                                                               #LUN.TT,-(SP)
#IO.DET,-(SP)
                                                                                 MOV.
                                                                                              (PC)+,-(SP)
3,12,
+0<377>
PC
                          012746
    012760
012762
1098 012764
                          003
104377
                                                                                 BYTE.
                                             014
                          000207
                                                                    i$:
                                                                                 RTS.
    1099
1100
    1101
1102
                                                                                 AST.
     1103
    1104 012766
1105 012766
1106 012772
1107 013000
                                                                    AST:
                          012667
                                        165154
                                                                                 MOV.
                                                                                               (SP)+,ASTWRD
#LOOP,BASE
                                                                                                                          ;GET.CHAR.OFF.STACK;
;CLEAR.LOOP.FLAG.
                          042767
                                                                                 BIC
ASTX$S
MOV
                                        000004
                                                      165014
             013000
                                                                                               (PC)+,-(SP)
115.,1
↑0<377>
            013002
013004
                          163
104377
                                             001
                                                                                 .BYTE
```

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TMAIN.
           MACRO Mill 27-MAR-80 13:39 PAGE 22
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    1109
    1110
                                                                        SCAN-A-TABLE FOR-A-VALID-COMMAND/MNEMONIC-
    1111
    1112
    1113
                                                                        RØ = NUMBER OF ENTRIES IN COMMAND TABLE R1 -> CHAR STRING IN GCML COMMAND LINE R2 -> TOP OF COMMAND TABLE
                                                                                                                                                ¥2
    1115
    1118
                                                                        OUTPUT:
    1119
                                                                        R1 -> ROUTINE THAT GOVERNS THE COMMAND (IF MATCH WAS MADE)
R1 -> CHAR STRING IN COMMAND LINE (IF NO MATCH WAS MADE)
     1126
    1121
                                                                        R0 = RELATIVE POSITION OF MATCHED ENTRY IN TABLE
    1122
    1123
    1124 013006
                                                            SCAN::
    1125 013006
                       010346
                                                                                   R3.-(SP)
R0.-(SP)
                                                                        MOV.
                                                                                                            ;SAVE · R3
    1126 013010
1127 013012
                       010046
                                                                        MOV.
                                                                                                            :SAVE . # . ENTRIES .
                       010146
                                                                                    R1,-(SP)
                                                                                                            :SAVE POINTER TO BEGINNING OF STRING
    1129 013014
1130 013016
                        011601
                                                            FHOUT1: MOV-
                                                                                    (SP),R1
#2,R3
                                                                                                            : POINT - TO - NON-BLANK - IN - COMMAND - LINE -
                        012703
                                    000002
                                                                                                            NUMBER OF CHARS IN NON-BLANK FIELD DOES COMMAND LINE MATCH TABLE ENTRY NO. TRY NEXT TABLE ENTRY: SUB-FROM-LODG COUNT.
                                                                        MOV-
    1131 013022
                        122122
                                                            FHIH1:
                                                                        CMPB
                                                                                    (R1)+,(R2)+
    1132-013024
1133-013026
                        001003
                                                                        BHE :
                                                                                    FHOUT2
                        005303
                                                                                    R3
                                                                                                            ; SUB · FROM · LOOP · COUNT
     ii34 0i3030
                        001374
                                                                                    FNIN1
    1135 013032
                                                                                                            COMMAND FOUND IN TABLE:
ADD ** UNCOMPARED CHARS TO POINTER:
THEN ADJUST TO NEXT TABLE ENTRY:
SUB FROM OUTER LOOP COUNT:
TRY AGAIN
                        000411
                                                                        BR
                                                                                    FHMTCH.
    1136 013034
                        060302
                                                            FNOUT2: ADD
                                                                                   R3.R2
R2
                        005202
                                                                        INC
    1138 013040
                        005300
                                                                                    RØ
     1139 013042
                        001364
                                                                        BNE
                                                                                    FN0UT1
    1140 013044
                                                                                    (SP)+,R1
(SP)+,R0
(SP)+,R3
                                                                        MOV
                                                                                                            : RESTORE COMMAND. LINE. POINTER.
    1141 013046
1142-013050
                       012600
                                                                        MOV.
                                                                                                            ;RESTORE R3
;COMMAND NOT:IN:TABLE:
                       012603
                                                                        MOV
    1143 013052
                       000261
    1144 013054
                       000207
                                                                        RTS.
                                                                                    PC
    1145
    1146 013056
                        010201
                                                                                                            :POINT-R1 AT-RTN-ADDR-IN-TABLE:

:POINT-TO-INCOMING R0 ON-STACK-

:GET-TOTAL-#-TABLE ENTRIES-

:GET-POSITION-OF-MATCHED-ENTRY-

:PUT-IN-R0 FOR-RETURN-
                                                            FNMTCH:
                                                                                    R2,R1
    1147
           013060
                       062706
                                   000002
                                                                                   #2,SP
(SP)+,R2
R0,R2
                                                                        ADD
    1148 013064
                        012602
                                                                        MOV
    1149
           013066
                        160002
                                                                        SUB.
     1150 013070
                       010200
                                                                        MOV.
                                                                                    R2.R0
    1151 013072
                       012603
                                                                        MOV.
                                                                                    (SP) + .R3
                                                                                                            :RESTORE R3
    1152-913974
                       000241
    1153 013076
                       000207
                                                                                    PC
```

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O-M1110 27-MAR-80 13:39 PAGE-23
Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
TMA IN.
    1155
    1156
                                                                   \label{eq:find-the-bound} FIND-THE-NEXT-NON-BLANK-IN-THE-COMMAND-BUFFER.\\ THEN-FIND-THE-LENGTH-OF-THE-STRING-THAT-STARTS-WITH-THAT-CHARACTER.
    1157
    1158
    1159
                                                                                                                                        more page of MAY
                                                                   INPUT:
                                                                   GCMLEN. - NUMBER.OF.UNPROCESSED BYTES.IN.COMMAND.LINE.
GCMPNT. - ADDR.OF.NEXT UNPROCESSED.POSITION.IN.COMMAND.LINE
    1161
    1162
    1163
    1164
                                                                   OUTPUT:
                                                                   GCMLEN, GCMPNT-UPDATED FOR NEXT-ENTRY INTO THIS ROUTINE.
    1165
    116€
                                                                   THIS ROUTINE IS DESIGNED TO BE ENTERED A NUMBER OF TIMES IN THE PARSING OF A COMMAND LINE. THE FIELDS GCMLEN AND GCMPNT ARE REFRESHED WHEN A NEW COMMAND LINE IS READ (SEE THE SUBROUTINE GCONLY).
    1168
    1169
    1171
    1172
    1173
    1174
          013100
                                                        FIND::
    1175 013100
1176 013102
                      010246
                                                                   MOV.
                                                                                                    ;SAVE-R2
;#-BYTES REMAINING IN-COMMAND-BUFFER-
                                                                              R2x = (SP)
                      016701
                                 165034
                                                                   MOV:
                                                                              GCMLEH, RI
    1177 013106
                      001440
                                                                   BEO.
                                                                              FSECX.
                                                                                                     : THERE · ARE · NONE
                                                                                                    ;LOAD CURRENT POINTER:
;LOAD CURRENT POINTER:
;LOOK FOR A BLANK:
;OK, BUMP TO NEXT CHAR:
;COMMA IN COMMAND LINE:
;TREAT COMMA AS BLANK:
    1178 013110
                      016702
                                                                   MOV
                                                                              GCMPNT, R2
    1179 013114
1180 013120
                      122712
                                 000040
                                                                   CMPB
                                                                               #40.(R2)
                      001403
                                                                   BEQ.
                                                                              10$
    1181 013122
                      122712
                                 000054
                                                                   CMPB
                                                                               #:..(R2)
    1182-013126
                      001004
                                                                   BNE
                                                                              2$
    1183 013130
                      005202
                                                        10$:
                                                                   INC
                                                                              R2 -
                                                                                                     :BUMP POINTER
    1184 013132
1185 013134
                                                                                                     ;SUB FROM REMAINING LENGTH
                      005301
                                                                   DEC
                                                                              R1
                      001367
                                                                   BHE
    1186 013136
                      000424
                                                                   BR
                                                                              FSECX-
                                                                                                     :NO NON-BLANK FOUND
    1187
    1188 013140
1189 013142
                      010246
                                                                              R2,-(SP)
                                                                                                     :TEMP SAVE POINTER TO BEGINNING OF STRING
                      005000
                                                                   CLR
                                                                              RØ
    1190 013144
                      122712
                                 000040
                                                        3$:
                                                                                                     ;LOOK.FOR.A.BLANK.
                                                                   CMPB
                                                                              #40.(R2)
    1191 013150
                      001407
                                                                   BEO
                                                                                                     FOUND END OF STRING TREAT COMMAS AS BLANKS
                                                                              4$
    1192-013152
                      122712
                                 000054
                                                                              # (R2)
    1193 013156
                      001404
                                                                   BEQ
                                                                              4$
    1194 013160
                                                                                                    :BUMP-POINTER:
:BUMP-CHAR-COUNT:
:SUB-FROM-BYTES-REMAINING:
                                                                   THO
                                                                              R2
    1195 013162
1196 013164
                      005200
                                                                   INC
                                                                              RØ
                      005301
                                                                   DEC
    1197 013166
                      001366
                                                                   BNE
                                                                              3$
    1198
    1199 013170
                      010267
                                 164759
                                                                   MO v
                                                                              R2.GCMPNT-
                                                                                                    ;SAVE POINTER FOR NEXT TIME
    1200
          013174
                      010167
                                 164742
                                                                   MOV.
                                                                              R1.GCMLEN:
                                                                                                     ; SAVE · BYTES · REMAINING · FOR · NEXT · TIME ·
    1201 013200
                                                                   MOV-
                                                                              (SP)+,R1
(SP)+,R2
                                                                                                     POINTER TO BEGINNING OF STRING
    1202-013202
1203 013204
                     012602
                                                                   MOM-
                                                                                                     :RESTORE R2
                      000241
                                                                   OLD.
    1204 013206
                      000207
                                                                   RTS
                                                                              PC-
    1205
    1206 013210
                     012602
                                                       FSECX:
                                                                   MOV.
                                                                              (SP)+,R2
                                                                                                     :RESTORE R2
    1207
          013212
                     000261
                                                                   SEC
                                                                                                                                       1208 013214
                     000207
                                                                   RTS
                                                                              PC:
```

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TMA IN
         MACRO M1110 27-MAR-80 13:39 PAGE 24
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   1210
1211
    1212
                                                                 GONVERT A NUMERIC VALUE FROM THE COMMAND LINE, THE VALUE MAY BE OCTAL, HEX, OR BINARY,
                                                       3
    1213
   1214
1215
    1216 013216
                                                      PACK::
    1217 013216
                     005046
                                                                 CLR
                                                                             -(SP)
                                                                                                  :CLEAR FOR COND CODE INDICATOR
    1218 013220
013220
                                                                 SAVE
                                                                            R0.R1.R2.R3.R4.R5
                     010046
                                                                            R0.-(SP)
R1.-(SP)
R2.-(SP)
                                                                 MOV.
          013222
                     010146
                                                                 MOV
          013224
                     010246
                                                                 MOV
          013226
013230
                     010346
                                                                 MOV-
                                                                            R3.-(SP)
                     010446
                                                                 MOV.
                                                                            R4,-(SP)
          013232
                                                                 MOV
                                                                            R5.-(SP)
   1219
1220 013234
1221 013240
                     022700
                                ававав
                                                                 CMP
                                                                            #6.R0
                                                                                                  ;UPPER·LIMIT·ON·OCTAL·DIGITS
                     002413
                                                                 BLT.
                                                                            PSECX-
                                                                                                  :ERROR · EXIT ·
    1222-013242
                     010146
                                                                            R1,-(SP)
R0,(SP)
                                                                 MOV
                                                                                                  :SAVE - STRING POINTER - TEMPORARILY
                                                                                                  *ADD CHAR COUNT

*ADD CHAR COUNT

*GET STRING ADDR INTO RØ FOR SUBRTN

*CONVERT ASCII OCTAL

*SUBRTN PUSHES RØ 1 TOO FAR
    1223 013244
                     060016
                                                                 ADD
   1224 013246
1225 013250
                     010100
                                                                 MOV
                                                                            R1.R0
                     004767
                                BBBBBBB
                                                                 JSR
                                                                            PC.$COTB
    1226 013254
                     005300
                                                                 DEC
                                                                            RA.
    1227 013256
1228 013260
1229 013262
                     020026
                                                                 CMP
                                                                            R0.(SP)+
                                                                                                  :FULL STRING CONVERTED
                     001003
                                                                 BNE
                                                                            PSECX-
                                                                                                  ;NO, ERROR.
                     010167
                                164524
                                                                 MOV
                                                                            R1.BIHWD
                                                                                                  :SAVE CONVERTED VALUE
    1230 013266
                     000403
                                                                 BR
                                                                            PCLCX-
                                                                                                  : AND - RETURN -
    1231
1232-013270
                     012766
                                           000014
                                                      PSECX:
                                                                 MOV
                                                                              -1,12.(SP)
                                                                                                  ;SET-COND-CODE-INDICATOR
    1232 013276
1233 013276
013300
013302
013304
013306
                                                                 RESTOR
MOV
                                                                            R0.R1.R2.R3.R4.R5
(SP)+.R5
(SP)+.R4
                                                      PCLCX:
                     012605
                     012604
                                                                 MOV
                     012603
                                                                 MOV.
                                                                            (SP)+,R3
                     012602
                                                                 MOV
                                                                            (SP)+,R2
(SP)+,R1
                     012601
                                                                 MOV
          013310
                     012600
                                                                             (SP)+.R0
                                                                 MOV.
    1234
    1235
          013312
                     005726
                                                                 TST.
                                                                            (SP) +
                                                                                                  :GET - COND - CODE - INDICATOR -
   1236
1237
          013314
013316
013320
                     002402
                                                                 BLT.
                                                                            1$
                                                                                                  :DO:SEC
                     000241
                     000401
                                                                 BR
                                                                            PACKX:
                                                                                                  :AND RETURN
                                                                 SEC
    1239 013322
                     000261
                                                      1$:
    1240 013324
                     000207
                                                      PACKX:
                                                                            PC
```

THE WALL TO SELECT THE SELECT THE

```
TMA IN
          MACRO-M1110 27-MAR-80 13:39 PAGE-26
                                             Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
    1261
1262
    1263
                                                                 WRITE · A · PRINT · LINE · TO · TT0
    1264
    1265
    1266 013372
1267 013372
                                                       CONSOL::
                                                                 SAVE
                                                                            R0.R1
R0.-(SP)
           013372
                     010046
                                                                 MOV
           013374
                     010146
                                                                 MOV
    1268
    1269
          013376
                      012700
                                                                                                  :PRINT BUFFER BYTE COUNT :POINT PAST END OF BUFFER :LOOK FOR A NON-BLANK
                                000120
                                                                 MOV.
                                                                            #80..R0
    1270 013402
1271 013406
                     012701
122741
                                0057721
                                                                 MOV.
                                                                            #PRINT+78.,R1
                                000040. :
                                                       1$:
                                                                 CMPB
                                                                             #40,-(R1)
    1272 - 013412
                      001003
                                                                 BNE -
                                                                            2$
                                                                                                  OK, WRITE LINE
    1273 013414
1274 013416
1275 013420
                      005300
                                                                            RØ
                                                                                                  ; DEC · CHAR · COUNT
                     001373
                                                                 BNE
                                                                             1$
                     000440
                                                                 BR
                                                                            ABEND2
                                                                                                  ;NO.NON-BLANKS?
    1276
                                                                            #IO.WVB, #LUN.TT, #EFN.1,, #STAT, .<#PRINT-2, ROS, ABENDER
    1277
           013422
                                                       2$:
                                                                 @10W$S
          013422
013424
                      005046
                                                                            -(SP)
                                                                 CLR
                      005046
                                                                 CLR
                                                                            -(SP)
           013426
                      005046
                                                                 CLR
                                                                            -(SP)
                                                                            -(SP)
RØ.-(SP)
#PRINT-2.-(SP)
           013430
                      005046
                                                                 CLR
           B13432
                     010046
012746
                                                                 MOV
           013434
                                005652*
                                                                 MO V
           013440
                      005046
                                                                 CLR
                                                                            -(SP)
          013442
013446
013450
                     012746
                                0000041
                                                                 MOV
                                                                            #STAT,-(SP)
                     йй5й46
                                                                 CLR
                                                                             -(SP)
                      112716
                                000001
                                                                 MOVB
                                                                            #EFN.1.(SP)
           013454
                      012746
                                 000001
                                                                 MOV.
                                                                            #LUN.TT,-(SP)
#IO.WVB,-(SP)
           013460
013464
                     012746
012746
                                000000G
                                                                 MGV.
                                                                 MOV:
                                                                             (PC) +_{\star} - (SP)
           013466
                          003
                                                                 .BYTE
                                    014
                                                                            3.12.
↑0<377>
           013470
                      104377
           013472
                                                                 BCC
JSR
                      103002
                                                                             .+6
           013474
                     004767
                                000022
                                                                            PC.ABEND2
    1278
    1279
    1280 013500
1281 013504
1282-013510
                     012701
                                0056541
                                                                 MOV.
                                                                            #PRINT,R1
                                                                                                  ; POINT · TO · STRING
                      112721
                                000040
                                                       4$:
                                                                 MOVB
                                                                            #40,(R1)+
                                                                                                  :CLEAR · LINE · TO · BLANKS ·
                     005300
                                                                                                  :DEC LOOP COUNT
                                                                 DEC -
                                                                            RØ
    1283
          013512
                                                                 BNE
                                                                            43
    1284
    1285 013514
013514
                                                                 RESTOR.
                                                                            R0.R1
                     012601
                                                                            (SP)+,R1
(SP)+,R0
                                                                 MOV
           013516
                      012600
                                                                 MOV.
    1286 013520
1287
                      000207
                                                                 RTS
    1288
          ē13522
                                                                 ABRT$S
                                                      ABEND2:
                                                                            #MYSELF
                                                                           #MYSELF.

#MYSELF,-(SP)

@(SP),-(SP)

#2,2(SP)

@2(SP),2(SP)

(PC)+,-(SP)

83.,3

+0(377)
           013522
                     012746
                                000000
                                                                 MOV.
                     017646
062766
017666
           013526
                                000000
                                                                 MOV
           013532
                                000002
                                           000002
                                                                 ADD
          013540
                                000002
                                           000002
                                                                 MOV
          013546
                     012746
                                                                 MOV
                     123
104377
          013550
                                    003
                                                                  .BYTE
          013552
                                                                 EMT
```

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TMA IN.
                  0-M1110 27-MAR-80 13:39 PAGE:25
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    1242
    1243
                                                                         CONVERT: A: VALUE: FROM: BINARY: TO: PRINTABLE: FORM: Ri =: WORD: TO BE: CONVERTED: R5 -> PRINT: LINE:
    1244
                                                             3
    1245
    1246
1247
1248 013326
                                                             ÚNPK::
     1249 013326
                                                                         SAVE
                                                                                     R0.R1.R2.R3.R4
                                                                                     R0.-(SP)
R1.-(SP)
R2.-(SP)
R3.-(SP)
            013326
013330
                        010046
                                                                         MOV-
                        010146
                                                                         MOV.
            0i3332
                        010246
                                                                         MOV
            013334
                        010346
                                                                         MOV
            013336
                        010446
                                                                         MOV
                                                                                     R4,-(SP)
     1250
                                                             ;
                                                                                                             :PREPARE TO CALL SYSTEM SUBRTN:
:KEEP LEADING ZEROS
:CONVERT TO OCTAL ASCII:
:RESTORE PRINT LINE POINTER. TO THE CAND DIMED IT
     1251 013340
                        010500
                                                                         MOV.
                                                                                     R5.R0
#1.R2.
PC.$CBOMG.
     1252-013342-
                        012702
                                    000001
                                                                         MOV.
     1253 013346
                        004767
                                    000000G
                                                                         JSR
     1254 013352
                        010005
                                                                         MOV.
                                                                                     R0.R5
     1255 013354
1256
1257 013356
                        005205
                                                                                                             :AND BUMP IT
                                                             ÚNPKX:
                                                                                     R0,R1,R2,R3,R4
(SP)+,R4
(SP)+,R3
(SP)+,R2
(SP)+,R1
     1258 013356
                                                                         RESTOR.
            013356
013360
013362
                        012604
                                                                         MOV
                        012603
012602
                                                                         MOV.
            013364
                        012601
                                                                         MÕV.
            013366
                        012600
                                                                         MOV.
                                                                                      (SP) + R0
     1259 013370
                        000207
                                                                         RTS
                                                                                     PC:
```

im Lines

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TMA IN
               0-M1110 27-MAR-80 13:39 PAGE 27
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   1290
   1291
   1292
                                                              WRITE TO TTO AND PROMPT.
   1294
   1295 013554
1296 013560
1297 013564
                    005267
                               164230
                                                   ENDTST:: INC
                                                                        ERMORD
                    005267
                               164224
                                                   EMFILE:: INC
                                                                        ERWORD
                    005267
                               164228
                                                   ENDMEM::
                                                               INC
                                                                        ERWORD
                                                   STOP:: INC
   1298
         013570
                    005267
                               164214
                                                                        ERWORD
   1299 013574
1300 013600
1301 013604
                    005267
                               164210
                                                                        ERMORD
                                                   ERR23:: INC
ERR22:: INC
ERR21:: INC
                    005267
                               164204
164200
                                                                        ERWORD
                    005267
                                                                        ERWORD
    1302-013616
                               164174
                    005267
                                                                        ERWORD
    1303 013614
                    005267
                               164170
                                                   ERR20::
                                                              INC
                                                                        FRUORD
    1304 013620
                                                             INC.
                    005267
                               164164
                                                   ERR19::
                                                                        ERWORD
    1305 013624
                               164160
                    005267
                                                   ERR18::
                                                                        ERWORD
    1306
1307
         013630
                    005267
                                                   ERR17::
                                                                        FRLIORN
         013634
                    005267
                               164150
                                                   ERR16::
                                                              IHC
                                                                        ERWORD
    1308
         013640
                    005267
                               164144
                                                   ERR15::
ERR14::
    1309 013644
                    005267
                               164140
                                                             INC
                                                                        ERWORD
    1310 013650
                    005267
                               164134
                                                   ERR13::
                                                                        ERLIORD
    1311 013654
                    005267
                               164139
                                                   ERR12::
                                                              IHC
                                                                        ERWORD
   1312 013660
1313 013664
1314 013670
                    005267
                               164124
                                                   ERR11::
                                                              INC
                                                                        ERWORD
                    005267
                               164120
                                                   ERR10::
                                                              INC
                                                                        ERWORD
ERWORD
                    005267
                               164114
    1315 013674
                    005267
                               164110
                                                   ERR8::
                                                              INC
                                                                        ERWORD
                    005267
   1316 013700
                               164104
                                                   ERR7::
                                                              THO
                                                                        ERWORD
   1317 013704
1318 013710
                    005267
                               164100
                                                   ERR6::
                                                              INC
                                                                        ERMORD
                    005267
                              164074
164070
                                                   ERR5::
                                                                        ERWORD
    1319 013714
                    005267
                                                   ERR4::
                                                              IHC
                                                                        ERWORD
   1320 013720
1321 013724
                    005267
                               164064
                                                   ERR3::
                                                             INC
INC
                                                                        ERMORD.
                    005267
                               164060
                                                   ERR2::
                                                                        ERWORD.
    1322-013730
                    005267
                              164054
                                                   ERR1::
                                                                        ERWORD.
    1323
   1324 013734
                                                   NESTOP:
   1325 013734
1326 013740
                    005267
                               164050
                                                   LPTST:: INC.
                                                                        ERWORD.
                    005267
                               164044
                                                   SELTST:: INC.
                                                                        ERWORD.
   1327
         013744
                    005267
                              164040
                                                   BASEL:: INC
                                                                        ERWORD.
                    000003
                                                   NEST.
                                                                        <.-NESTOP>/4
                                                                                                                                      1329
   1339
                                                             USE:THE:INDEX:ERWORD:TO:COUNT:UP FROM:THE:BOTTOM:OF:THE:MESSAGE:TABLE:FIND:THE:END:OF:THE:MESSAGE:FIRST,THEN:THE:BEGINNING,THEN:GET:THE:LENGTH:
   1331
   1332
   1334 013750
                    016702, 164034.
                                                              MOV
                                                                        ERWORD, R2
                                                                                            :LOAD LOOP-COUNT-
:POINT-TO-END-OF-MESSAGE-TABLE
:LOOK-FOR-END-OF-MESSAGE-
         013754
   1335
                    012701
                              007613
                                                              MOV
                                                                        #ASCIZ,R1
         013760
                    105741
                                                   1$:
                                                              TSTB
                                                                        -(R1)
   1337
         013762
                                                              BNE -
                                                                        1$
                                                                                            :LOOP COUNT:
:BACK UP ANOTHER MESSAGE
:SAVE POINTER TO END OF MESSAGE
:BACK UP TO BEGINNING OF MESSAGE
                    005302
001374
   1338
         013764
                                                                        ŘŽ.
         013766
                                                              BNE
                                                                        1$
   1349
         013770
                                                             MOV
                                                                        R1.R0
   1341
         013772
                    105741
                                                   2$:
                                                              TSTB
                                                                        -(R1)
         013774
   1342
                    001376
                                                             BHE -
                                                                        2$
   1343
         013776
                                                             THO
                                                                        ₽4
                                                                                             ;BUMP TO FIRST CHAR OF MESSAGE
   1344 014000
                    160100
                                                             SUB
                                                                        R1.R0
                                                                                            :RØ NOW = MESSAGE LENGTH
   1345
   1346 014002
                                                             QI W$S. #IO.WVB, #LUN.TT, #EFN:1,
                                          Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
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MACRO Miii0 27-MAR-80 13:39 PAGE 27-1
Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
TMAIN
         014002
                   005046
                                                           CLR
                                                                     -(SP)
         014004
                   005046
                                                           CLR
                                                                    -(SP)
         014006
                                                           CLR
                   005046
                                                           CLR
         014010
                   005046
                                                                     -(SP)
         014012
                   010046
                                                           MOV
                                                                     R0,-(SP)
         014014
                   010146
                                                           MOV-
                                                                     R1.-(SP)
         014016
                   005046
                                                           CLR
                                                                     -(SP)
                   012746
         014020
                             0000044
                                                           MOV
                                                                     #STAT,-(SP)
          014024
                   005046
                                                           CLR
                                                                     -(SP)
         014026
                   112716
                             йййййй і
                                                           MOVB
                                                                     #EFN.1.(SP)
                   012746
          014032
                             999991
                                                                     #LUN.TT,-(SP)
#IO.WVB,-(SP)
(PC)+,-(SP)
                                                           MOV.
                             000000G
          014036
                   012746
         014042
                   012746
                                                           MOV.
          014044
                       ййЗ
                                                          BYTE
BCC
                                 014
          014046
                    104377
                                                                     ↑0<377>
         014050
                    103002
                                                                     . +6
          614052
                   004767
                             000114
                                                           JŠŘ
                                                                     PC ABEND
    1347
    1348
         014056
                                                           CLEF$S
                                                                     #EFH.1
         014056
014062
                   012746
                                                           MOV.
                                                                     #EFH.1,-(SP)
                   012746
037
                                                           MÖV
                                                                     (PC) + . - (SP)
         014064
                                 002
                                                           .BYTE
                                                                     31..2
          014066
                    104377
                                                           EMT
                                                                     ↑0<377>
   1349
1350
                   105767
003436
         014070
                             163710
                                                           TSTB
                                                                    STAT
                                                                                        ; GOOD · RETURN
         014074
                                                                     ABEND
                                                                                        : NO -
    1351
   1352
1353
                                                           ISSUE-GCML
    1354 014076
                   022767
                             000003
                                                                                        :PROMPT·WITH·MESSAGE
:NO. JUST·EXIT·
                                       163704
                                                           CMP
                                                                     #MEST, ERWORD
    1355
         014104
                   002427
                                                           BLT.
                                                                     TTX
    1356
         014106
                   012700
                             0000201
                                                                                        POINT TO COMMAND LINE BUFFER NUMBER OF BYTES IN BUFFER
                                                           MOV
                                                                     #GCMBUF,R0
    1357
         014112
                   012701
                             000120
                                                           MOV
                                                                     #80.,R1
    1358
         014116
                   112720
                             000040
                                                           MOVB
                                                                     #40.(R0)+
                                                                                        CLEAR COMMAND LINE FINISHED?
    1359 014122
                   005301
    1360
         014124
                   001374
                                                           BNE
                                                                                        ;NO·
    1361
   1362
1363
                                                           ISSUE - "GET - COMMAND - LINE"
                                                                                                                              <del>THE</del>
                                                           SET-UP-FIELDS:
    1364
                                                           GCMBUF - -
                                                                      WORK AREA TO HOLD COMMAND CINE
    1365
                                                                                                               1
                                                           GCMLEN.
                                                                      LENGTH OF LINE READ
   1366
                                                           GCMPHT.
                                                                      POINTER TO COMMAND LINE (SET TO POINT TO BEGINNING)
   1367
    1368
         014126
                                                           GCML$
                                                                     #GCMBLK -
         014126
                   012700
                             0076141
                                                                    #GCMBLK,R0
G.PSDS(R0)
                                                           MOST.
         014132
                   005060
                             000142
                                                           CLR
         014136
                   004767
                             000000G
                                                           JSR
    1369 014142
                   103413
                                                           BCS
                                                                    ABEND
    1370 014144
                   016067
                             000146
                                       163770
                                                           MOV.
                                                                    G.CMLD(R0),GCMLEN.;SAVE.LENGTH.
   1371 014152
                   012701
                             0000201
                                                          MOV
                                                                    #GCMBUF,R1
#GCMBUF,GCMPNT
                                                                                        :POINT.TO.COMMAND.BUFFER
    1372 - 014156
                                                                                        : INITIALIZE COMMAND BUFFER POINTER
: CLEAR ERROR DUMBER UNDICATOR
                   012767
                             0000201
                                       163760
                                                           MOV
    1373
         014164
                   005067
                             163620
                                                 TTX:
                                                           CLR
                                                                    ERWORD
    1374 014170
                   000207
                                                          RTS
                                                                                        :AND RETURN
   1375
   i376
         014172
                                                 ABEND:
                                                          ABRT$S.
                                                                    #MYSELF
                                                                                                                      I_{i}:
         014172
014176
                   012746
                             000000
                                                          MOV
                                                                    #MYSELF,-(SP)
@(SP),-(SP)
                   017646
                             000000
                                                          MÖV
         014202
                                        ติติติติอิว
Approved For Release 2005/07/1
                             000002
                   062766
                                                                             CIA-RDP85-00514R000200020001-3
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1377 1378 010516' : END: START-

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TMA IN
           MACRO-M1110 27-MAR-80 13:39 PAGE-27-3
SYMBOL TABLE
                                                   Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
                                     BYTE20=-000024
ABEND
            014172R
                                                                           BYTE72= 000110
                                                                                                                DBLD
                                                                                                                             012074RG
                                                                                                                                                      FSECX-
                                                                                                                                                                   013210R
                                     BYTE21=-000025
BYTE22=-000026
                                                                                                                                                 F.ACTL = 000076
F.ACTL = 000076
F.ACUC = 000040; ***
F.BBFS = 000070
F.BGBC = 000057
                                                                           BYTE73= 000111
ABEND2 -
           013522R
                                                                                                                DBLDCX: 012504R:
                                                                           BYTE74= 000112
AHIGH:
            000206RS
                                                                                                                DBLDSX - 012474R DBLDSX: 012506R DBLD1 012102R
                                     BYTE23= 0000027
                                                                           BYTE75= 000113
                                     BYTE24= 000030
BYTE25= 000031
ALUCKE=-040000
                                                                           BYTE76= 000114
ALU0E - - 004000
                                                                           BYTE77= 000115
BYTE78= 000116
BYTE79= 000117
                                                                                                                 DBR.RD= 000001
                                                                                                                DB$CPP= 001457
DB$SPT= 000026
DB$TPC= 000023
DF1 = ******* GX-
APLACE 000016RG
                                     BYTE26 = . 000032
                                                                                                                                                      F.BKDN= 000026
ASCIZ
                                     BYTE27 = . 000033
                                                                                                                                                      F.BKDS-000026
F.BKDS-000050
F.BKFF-000051
F.BKYT-000024
F.BKYB-000064
                                     BYTE28=-000034
BYTE29=-000035
BYTE3 =-000003
BYTE30=-000036
                                                                           BYTE8 = 000010
BYTE80 = 000120
AST
            012766R ·
ASTFLG= 000020 G
ASTWRD 000146R · A01 = · 010000
                                                                           BYTE81= 000121
                                                                                                                 DISPGS= 100000
                                                                           BYTE02=-000122-
BYTE03=-000123
                                                                                                                 DMAAWR = . 000005
                                      BYTE31=-000037
                                                                                                                DMARRD= 000003
                                                                                                                                                      F.CHR -- 0000075
                                     BYTE32= 000040
BYTE33= 000041
BYTE34= 000042
BASEL -
            013744RG
                                                                           BYTE84= 000124
                                                                                                                 DMARWR = - 000004
                                                                                                                                                      F.CNTG= 000034
F.DFNB= 000046
                                                                                                                            .00000⊶
.000172RG. ~-
            000212RG
BHIGH:
                                                                           BYTE85=-000125
            000012RG
BINWD
                                                                           BYTE86= 000126
BYTE87= 000127
                                                                                                                DSAVE :
DSEND :
                                                                                                                             002322RG
                                                                                                                                                      F:DSPT= 000044
BITVAL = 000000
BIT0 = 000001
BIT1 = 000002
                                      BYTE35= 000043
                                                                                                                             005046RG
000322RG
                                                                                                                                                   F.DVNM= 000134
F.EFBK* 000010
                                     BYTE36=-000044
BYTE37=-000045
BYTE38=-000046
                                                                           BYTE88= 000130
                                                                                                                 DTBL -
                                                                           BYTE89 = 000131
BYTE9 = 000011
                                                                                                                 EFN:1 = 000001 G
                                                                                                                                                      F.EFN = 000050
BIT10 = 002000
                                                                                                                ENBR-
                                                                                                                         = 010000
                                                                                                                                                      F.E0BB=-000032
BITii = 004000
BITi2 = 010000
BITi3 = 020000
                                      BYTE39= 000047
                                                                           BYTE90= 000132
                                                                                                                ENDMEM 013564RG
ENDTST 013554RG
                                                                                                                                                      F.ERR -- 000052
F.FACC -- 000043
                                     BYTE4 = 000004
BYTE40= 000050
                                                                           BYTE91= 000133
                                                                           BYTE92=-000134
BYTE93=-000135
BYTE94=-000136
                                                                                                                 ENFILE: 013560RG
                                                                                                                                                      F.FFBY= 000014
BIT14 = 040000
                                     BYTE41= 000051
                                                                                                                 EN1
                                                                                                                          =·***** GX
                                                                                                                                                      F.FNAM= 000110
BIT15 = 100000
                                      BYTE42= 000052
                                                                                                                             013730RG-
013664RG-
                                                                                                                ERR1
                                                                                                                                                      F.FNB -- 000102
BIT2 - 000004
BIT3 - 000010
                                     BYTE43=-000053
                                                                           BYTE95= 000137
                                                                                                                ERR10
                                                                                                                                                      F.FTYP= 000116
F.FVER= 000120
                                     BYTE44= 000054
BYTE45= 000055
                                                                           BYTE96= 000140
                                                                                                                             013660RG
                                                                                                                 ERR11
                                                                                                                             013654RG : 013659RG : 017544PC
         = 000020
                                                                                                                                                     F: FYER=: 000120
F: HIBK=: 000004
F: LUN: =: 000054
F: MBCT=: 000055
F: MBFG=: 000056
BIT4
                                                                           BYTE97 = 000141
BYTE98 = 000142
BYTE99 = 000143
                                                                                                                 ERR12
          = 000040
                                     BYTE46= 000056
                                                                                                                 ERR13
                                                                                                                 ERR14
DIT6
         = 000100
                                      BYTE47 = . 000057
                                                                                                                             013644RG
013640RG
                                     BYTE48=-000060
BYTE49=-000061
BYTE5 =-000005
         = · 000200
= · 000400
BIT7
                                                                           BYTVAL = . 000144
                                                                                                                 ERR15
BIT8
                                                                           CBKALL= 001000
                                                                                                                 ERR16
                                                                                                                             013634RG
          = · 001000
BIT9
                                                                           CBKCLK=-000400
CHIGH- 000216RG
                                                                                                                 ERR17
                                                                                                                             013630RG
                                                                                                                                                      F.NRBD= 000024
BLOW
                                      BYTE50 = . 000062
                                                                                                                                                      F.NREC= 000024
F.NREC= 000030
F.OVBS= 000030
F.RACC=, 000016
F.RATT= 000001
                                                                                                                             013624RG -
013620RG -
                                                                                                                ERR18
                                                                           CHLEN 000176RG
CH1 = ****** GX-
CLOW 000220RG
                                     BYTE51=-000063
BYTE52=-000064
BYTE53=-000065
            005450RG - 005452RG -
BIEND
                                                                                                                 ERR19
BTOVER
                                                                                                                 ERR2
                                                                                                                             013724RG
BTRANS
            005250RG
                                                                                                                ERR20
                                                                                                                             013614RG
                                                                                                                ERR21
ERR22
BUFCX-
            010770R
                                      BYTE54= 0000066
                                                                           CMILUN = . 000002 . G .
                                                                                                                                                      F.RCNM= 000034
F.RCTL = 000017
F.RSIZ= 000002
                                                                                                                             013610RG:...
013604RG:
BUFCX2 -
            011206R
                                      BYTE55=-000067
                                                                           CHOBRE = 100000
BUFFSA.
                                     BYTE56=.000070
BYTE57=.000071
                                                                           CNTLX: 011400R:
CNUM: =:000015 G:
COMXX: 010522RG
            010626RG
                                                                                                                 ERR23
                                                                                                                             013600RG
BUFSET-
            011014RG
                                                                                                                 ERR3
                                                                                                                             013720RG
                                                                                                                                                       F.RTYP- 000000
BUFS2
            011004PG
                                      BYTE58= 0000072
                                                                                                                 ERR4
                                                                                                                                                      F.SEQN=-000100
F.SPDV=-000072
F.SPUN=-000074
                                                                                                                             013714RG
BUESS:
            011002R -
                                     BYTE59=.000073
BYTE6 =.000006
                                                                           CONSOL.
                                                                                        013372RG
                                                                                                                             013710RG
                                                                                                                 ERR5
BUFXX2.
            011220R
                                                                           COUNT: 000166RG:
CPCCEN=:010000
                                                                                                                 ERR6
                                                                                                                             013704RG
BYTE0 = 000000
BYTE1 = 000001
                                      BYTE60- 000074
                                                                                                                ERR7 013700RG F.STBK - 000036
ERR8 013674RG F.W. *P.UNIT - 000136
ERR9 010670RG F.URBD - 000020
ERWORD 00010R F.VBN - 000064
                                     BYTE61=-000075
BYTE62=-000076
                                                                           CPREAD = 040000
BYTE10= 0000012
                                                                                                                                                  F. VBN = 000064
F. VBSZ = 000060*
                                                                           CPWRTE = . 020000
CSADRD = . 000004
BYTE11= 000013
                                      BYTE63=.000077
BYTE12=-000014
                                      BYTE64= 000100
                                                                           CSEQCI = 100000
                                                                                                                 EXI 010620R FD.CCL= ********* GX
BYTE13= 000015
                                      BYTE65= 000101
                                                                            CSOE· = 000040
                                                                                                                                                      GCMBLK -
GCMBUF -
                                                                                                                                                                   007614R
BYTE14= 0000016
                                     BYTE66= 000102
BYTE67= 000103
                                                                                                                 FD.REC= ******* GX
                                                                           CSWRTE = - 000100
                                                                                                                                                                   MAMMANAG.
BYTE15= 000017
                                                                           CTBL 000236RG
DATALN 000170RG
                                                                                                                 FD.TTY= ******* GX-
FIND 013100RG
                                                                           CTBL -
                                                                                                                                                       GCMLEN.
                                                                                                                                                                   000142RG
BYTE16=-000020
BYTE17=-000021
                                      BYTE68= 000104
                                                                                                                 FIND 013100RG
FNIN1 013022R
FNMTCH 013056R
                                                                                                                                                      GCMPNT 000144RG
GCONLY, 012510RG
                                     BYTE69= 000105
BYTE7 = 000007
                                                                           DATA1
                                                                                        000200PG
BYTE18= 000022
                                                                                                                                                                                   177
                                                                           DATA2 -
                                                                                        000202RG
                                                   ยยย106 DATA3 000204RG FN0UT1 013014R ชีวิชีย์
000107 DA1 *********** GX FN0UT2 013034R เมื่
Approved For Release 2005/07/12 SIA-RDP85-00514R000200020001-3
BYTE19= 0000023
                                     BYTE70= 000106
                                                                                                                                                       GE.CLO= 000004/
BYTE2 - = - 0000002
                                      BYTE71= 000107
                                                                                                                                                       GE.COM= 000001
```

1. 17.17

TMAIN MARO M1110 27-MAR-80 13:39 PAGE 27-4 SYMBOL TA Approved For Release 2005/07/19 CIA-RDP85-00514R000200020001-3 GE:CON=:000020 MYSELF: 000000R Ω\$CP2. = .000260 RTNPT. 000150RG T\$CD = 000100 GE:EOF=:177766 Q\$CSC -- 010000 000144 RUI = - жжжжжжж GX -T\$CLK - = - 002000 SCAN. 013006R6 SELTST 013740RG GE.IND=-000002 NEST-Q\$CSEL = 000360 000003 `T\$DISK=-000200 T\$DRD-=-000004 HESTOP Q\$CSET=.0000002 Q\$CSP.=.020000 GE.IOR= 1777777 013734R GE:LC:=:000010 HEXTD. 012456R SEQ.CI=.000010 T\$EMEM= · 010000 GE.MDE=-177774 GE.OPR=-177776 012226R Q\$DMA -- 000001 SET. 011022R T\$FSAA=:000000 H.DID = 000024 Q\$ENBK = . 040000 010516R START T\$FSAB= 000004 T\$FSAC= 000014 GE.RBG= 177730 H.DVHM= 000032 Q\$ENOP = . 020000 STAT 000004RG Q\$FAL = 004000 Q\$FC = 000045 GE:SIZ= 000040 H.FID -- 000000 STOP 013570RG T\$FSB2= 000010 G.CMLD= 000146 H.FNAM= 000006 STI = · жжжжжжж GХ T\$IB = 000026 G.DPRM= 000160 N:FTYP= 000014 Q\$F0 - 000044 Q\$FP - 000046 Q\$HBF - 000002 S\$CLR - = - 000000 T\$IBAR= 000024 G.ERR - = - 000140 H.FVER= 000016 S\$LA - 000001 T\$IBE - - 020000 T\$IBF - - 040000 G.ISIZ= 000020 G.LPDL= 000060 M:NEXT= 000022 = 0000005 S\$QB N.STAT= 0000020 Q\$ICP -- 000006 S\$0R -= 0000006 T\$ICD - = - 000040 G.MODE = . 000141 T\$MODE = 004000 T\$OB = 004000 T\$OBE = 004000 H:UNIT= 000034 Q\$IHB - - 000003 S\$0X = 000004 G.PSDS=-000142 OFFSET 012006RG Q\$IHRL= 000002 S\$SR = 000007 G.SIZE = 000224 OFF6 000174RG S\$S1 = 000010 S\$S2 = 000014 OSIMRP= - AAAAA7 HANG-012622RG OHIGH 000226RG Q\$LBD---001000 T\$0BF·=·010000 IHIGH-000222RG OLOW-000230RG Q\$LBDP=-001001 S.BFHD= 000020 S.FATT= 000016 S.FDB = 000140 T\$0BRA= · 000034 ILOU 000224RG ONCE --000010 G Q\$LBP - - 000001 T\$0BWA=.000032 INCVAL : 000160RG IO.ATA = ********* G OUT: = 002000 G Q\$LDCD=-000003 T\$OUTA = 100000 OUT 1 013574RG Q\$LDMD= 000004 Q\$LDPP= 002000 S.FNAM= 000006 T\$RBD0= 000200 IO.DET= ·****** G 013216RG PACK S.FNB -- 000036 T\$RNB - = - 000040 IO:RVB=·******* G 013324R Q\$LHP - - 010000 PACKX S.FNBW= 000017 T\$RSET=: 040000 10.WVB= ****** G PAR\$\$\$=:000027 Q\$MNC - = 140000 S.FNTY= 000004 ∓\$SC: = 000022 ↑T\$SCLk = 020000 ↑T\$SEG! = 000000 012706RG KILL POLICY: Q\$MR · = · 000052 Q\$MRP · = · 000040 013276R S.FTYP= 000002 LDCHTL 011222RG PONTLX 011706R S:NFEN= 0000020 LD1 = ******* GX LI1 = ******* GX Q\$MRP2=-000240 Q\$MSC-=-040000 Q\$MSET=-000004 PDATA 011402RG TD\$CTR= 176370 TD\$CTW= 176360 T\$SEG2= 000001 PDCCX-011606R T\$SEG3=.000002 T\$SO =.000001 LOC.EN= 000100 PDCX. 011600R TD\$INL= 004000 LOC:WA= 040000 PDDX Q\$MSP · = · 100000 Q\$NCLK = · 176000 TD\$MEM=.000270 TD\$OAR=.176344 TD\$OTR= 176346 011612R T\$UBUS≕ 100000 LOC:WB= 100000 LOOP - 000004 G PDVX 011572R T\$1CLK=-000400 Q\$PPSW=-000320 Q\$PPSW=-000320 Q\$PP2-=-000300 PLB = 0000010 T\$8BEN= 000020 LOOPR 012566RG PLC - 0000020 TD\$QRD≃∙000274 UBD.IN=#000020 LOOPX. 012704R PLD --000030 TD\$SW-=-176376 "UNPK 013326RG LPTST 013734RG LUN.TT= 000001 G PLRWR - = - 000200 Q\$QHLT= 000013 TD\$TAR= 176372 UNPKX, 013356R UPLIM 000164RG Q\$QL - - 000043 Q\$QLA - - 000053 PLR:EN= 000200 TD\$TAW= · 176362 MAREN 1 = . 000001 PRCHTL 011614RG TD\$TDR= . 176374 WORD0 = 000000 MAREN2= 004000 MARLOD= 010000 PRDATA 011710RG Q\$QLB - = - 000054 TD\$TDW=-176364 THIGH- 000232RG-WORD1 = 000002 Q\$QLR.=.000001 Q\$QW.=.000042 PRDX-012004R WORD10= 0000024 MAROUT= 000002 PRINT. 005654RG TLOW-000234RG WORD11= 000026 MAR:LO= 002000 MAR:OU= 000040 PR1 = ****** GX Q\$RDCD= 000005 TREDB WORD12= 000030 WORD13= 000032 010320RG PSECX: = 000004 G Q\$RDMD=-000006 MBKALL = 001000 Q\$REBK=-001000 Q\$RHC-=-006000 Q\$RSC-=-004000 = 001000 G QN. TRNM**B-75-01-045**0R + WORD14= 000034 MBKCLK= 000400 --000400 G WORD15= 000036 QR\$CR1= 176420 QR\$CR2= 176422 MEND. 000156RG TR6TBL 005050RG WORD16= 000040 WORD17= 000042 MMADRD= 000100 Q\$RSET=-000010 014164R TTX-MMLEFT= . 000002 OR\$LBR= - 176424 Q\$SM- = 100000 Q\$SP- = 000120 TXTFDB 010122RG WORD18= 000044 MMOE - 000001 MMURTE - 000010 Q\$ATTH= 000100 TXTLUN= 000003 G WORD19= 000046 Q\$BCL = 000001 Q\$CCCP= 000040 Q\$SP2 - 000340 TXTHMB: 010262R: T\$AD: =:000020 T\$BA: =:000002: WORD2 - 000004 WORD20 - 000050 MNOBRE = 100000 RE1 MOYTR -012252R Q\$CHB - = . 000400 RGQ.EN= 000200 WORD21= 000052' MREN1 = 000001 T\$BD· = 000002 T\$BSO· = 100000 Q\$CHRL=-000200 RGQ.VA= 020000 WORD22= 000054 WORD23= 000056 MREN2 - - 020000 0\$CLR - = - 000040 RIDE: =:000100 G: RP =:000200 G: RSPCNT: 000162RG: ### 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 | 1988 Q\$CNC - = - 030000 MSTRT. 000152RG WORD24≕ 000060 MSTR2. 000154RG Q\$CP = 000060 WORD25= 000062 MSYN - - 000040 Q\$CPCC=-000010 WORD26= 000064*

```
TMA IN -
          MACRO-M1110 27-MAR-80 13:39 PAGE-27-5
SYMBOL TABLE
                                             Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
                                 WORD45= 000132
WORD46= 000134
WORD27= 0000066
                                                                   WORD63=-000176
                                                                                                    WORD81= 000242
                                                                                                                                     WORD99=-000306
WORD28≃.000070
                                                                   WORD64= 000200
                                                                                                    WORD82= 000244
                                                                                                                                     WRDVAL = . 000310
WORD29= 000072
WORD3 = 000006
                                 UORD47 = : 000136
                                                                   WCRD65= 000202
WCRD66= 000204
                                                                                                    WORD83= 000246
                                                                                                                                     WWORDS 000200RG
XTREAD= 001000
                                 WORD48 = . 000140
                                                                                                    WORD84= 000250
WORD30=-000074
WORD31=-000076
WORD32=-000100
                                 WORD49= 000142
                                                                   WORD67= 000206
                                                                                                    WORD85=-000252
                                                                                                                                     XTURTE = 000400
                                 WORD5 = 000012
WORD50 = 000144
                                                                   WORD68=-000210
WORD69=-000212-
WORD7 =-000016
                                                                                                    WORD86= 000254
                                                                                                                                     $CBOMG = ******** GX-
$COTB = ******** GX-
$DIV = ******** GX-
                                                                                                    WORD87= 000256
ώORD33=:000102
                                 WORD51= 000146
                                                                                                    WORD88= 000260
                                 WORD52=-000150
WORD53=-000152-
WORD54=-000154
WORD34= 000104
WORD35= 000106
                                                                   WORD70= 000214
                                                                                                    WORD89=-000262
                                                                                                                                     $MUL
                                                                                                                                             = - >KKAÇKK + €X;
                                                                   WORD71=-000216
WORD72=-000220
WORD73=-000222-
                                                                                                    WORD9 = 000022
                                                                                                                                     $$$
                                                                                                                                              = 007774R
WORD36=-000110
                                                                                                    WORD90= 000264
                                                                                                                                     $$$ARG= 000002
WORD37= 000112
                                 WORD55= 000156
                                                                                                    WORD91=-000266
                                                                                                                                     $$$T1 = 000067
WORD38=-000114
                                 WORD56= 000160
                                                                   WORD74= 000224
                                                                                                    WORD92=-000270
WORD93=-000272
                                                                                                                                     $$$T2 - - 000027
WORD39= 000116
                                 WORD57=-000162
                                                                   WORD75= 000226
                                                                                                                                      .FSRCB=⋅жжжжжж
WORD4 = 000010
                                 WORD58= 000164
                                                                   WORD76=-000230
WORD77=-000232-
WORD78=-000234
                                                                                                                                     .GCML1= ********* G
                                                                                                    WORD94= 000274
WORD40= 000120
                                 WORD59=-000166
                                                                                                    WORD95= 000276
WORD41=-000122
                                 WORD6 = 000014
                                                                                                    WORD96=-000300
WORD97=-000302
                                                                                                                                     ...PC2=-010474R
WORD42= 999124
                                 WORD60= 000170
                                                                   WORD79= 000236
                                                                                                                                     ...PC3=-010320R
WORD43= 000124
                                 WORD61= 000172
WORD62= 000174
                                                                   WORD8 = 000020
WORD80 = 000240
                                                                                                    WORD98= 000304
                                                                                                                                      ...TPČ= 000020
WORD44= 000130
. ABS.
           рарара
                          000
                          001
           014224
$$FSR1
           002040
                          002
ERRORS DETECTED:
                         Ø
VIRTUAL MEMORY·USED: 8170 WORDS· (·32·PAGES)
DYNANIC·MEMORY: 9140 WORDS· ( 35 PAGES)
ELAPSED·TIME: 00:01:42·
IMAIN›TMAIN/-SP=E20.13IM.E20.13TMAIN·
```

```
A.A. A. IMPROVIDED IN
   MACRO-M1110 27-MAR-80 15:39 PAGE-5
                                   Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
                                                       .FITLE. FREG
 23
   000000
                                                       .PSECT-
 4567
                                                      TERM DETECTOR MANUAL DEBUGGING AIDS
                                                      REGISTER EXERCISES
 8
                                                      COMMANDS:
ST STORE INTO A TD REGISTER
RE READ FROM A TD REGISTER.
 9
10
11
12
13
                                                      ONCE A COMMAND HAS BEEN EXECUTED FOR AN ERROR ENCOUNTERED)
THIS MODULE RETURNS CONTROL TO THE MODULE THAIN AT LOCATION
14
15
                                                       'COMXX'.
16
18
                                                      STORE -
19
                                                      TABLE OF REGISTER MNEMONICS AND ASSOCIATED ROUTINE
20
21
22
                                                      ADDRESSES.
    000000
                                            STITBL::
23
    ававав
              101
0002241
                            101
                                                      .ASCII
                                                                Z88Z
                                                                                    :FSA · ALMEMORY: ADDRESS · REGISTER
    000002
                                                      .WORD
                                                                STA-
25
    000004
                  102
                            101
                                                                ZBAZ
                                                                                    :FSA·B·MEMORY-ADDRESS-REGISTER
26
    000006
              ййй234
                                                       .WORD
                                                                STB.
    000010
                  103
                            101
                                                       .ASCII
                                                                                    :FSA · C · MEMORY · ADDRESS · REGISTER ·
    000012
              000244
                                                       . MORD
                                                                STO
29
    000014
                  111
                            102
                                                       .ASCII
                                                                 /IB/
                                                                                     ; INPUT BUFFER MEMORY ADDRESS REGISTER
30
    000016
              000276
                                                       .WORD
31
    000020
                            102
                  117
                                                       .ASCII
                                                                 /08/
                                                                                    OUTPUT BUFFER MEMORY ADDRESS REGISTER
    000022
                                                       .WORD
                                                                STO
33
    000024
                  102
                            124
                                                                                    :BYTE TRANSLATOR MEMORY ADDRESS REGISTER
                                                       ASCII.
                                                                ZBTZ
34
    000026
              000346
                                                       .WORD
                                                                STRT
35
    000030
                 123
                            103
                                                       .ASCII
                                                                 /SC/
                                                                                    :SECTOR · COUNTER
36
              000372
    000032
                                                       .WORD
    000034
                  103
                            122
                                                       .ASCII:
                                                                \angle CR \angle
                                                                                     :CONTROL REGISTER
              000416
38
    000036
                                                       .WORD
                                                                STCR
39
              000010
                                            STILH-
                                                                 <.-ST1TBL>/4
40
41
                                                      READ
42
    000040
43
                                            RE1TBL::
44
    000040
                  191
                            101
                                                                ZAAZ
REAA
                                                       .ABCII
                                                                                    ;FSA-A-MEMORY-ADDRESS-REGISTER-
45
    000042
              000526
                                                       .WORD
46
    000044
                  102
                            101
                                                      .ASCII
                                                                /BA/
                                                                                    :FSA · B · MEMORY · ADDRESS · REGISTER · ?
47
    000046
              000542
                                                       .WORD
    000050
                  103
                            101
                                                       .ASCII
.WORD
                                                                                    :FSA·C MEMORY-ADDRESS-REGISTER
                                                                 /0A/
49
    000052
              000556
                                                                RECA
   000054
000056
50
                  111
                            102
                                                       .ASCII
                                                                 /18/
                                                                                    :INPUT BUFFER MEMORY ADDRESS REGISTER
              000572
                                                       .WORD
.ASCII
                                                                REIA
52
53
54
    000060
                            102
                                                                Z08z
                                                                                    :OUTPUT-BUFFER-MEMORY-ADDRESS-REGISTER
   000062
              000614
                                                       .WDRD
                                                                REOA
   000064
                                                                                    : \texttt{BYTE} \cdot \texttt{TRANSLATOR} \cdot \texttt{MEMBRY} \cdot \overset{\bullet}{\text{MDDRESS}} (\texttt{REG} / \texttt{STER})
                 102
                            124
                                                                /BT/
RETA
                                                       .ABCII.
55
56
   000066
              000636
                                                      .WORD
    000070
                            103
                 123
                                                      .ASCII
                                                                 /SC/
                                                                                    ;SECTOR · COUNTER ·
    000072
             000660
                                                       . MORD
```

CIA-RDP85-00514R000200020001-3

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TREG-

```
TREG-
             10 M1110 27-MAR-80 15:39 PAGE 5-1
Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
      58 000074
                                127
                                                           .ASCII
                                                                                       ;STATUS WORD
     59
         000076
                   0007101
                                                          .WORD
                                                                   RESW
ZCRZ
         000100
     60
                      103
                                122
                                                          .ASCII.
                                                                                       :CONTROL REGISTER
         000102
     6 i
                   0007025
                                                          .WORD
                                                                    RECR
     62
         000104
                      115
                                123
                                                          .ASCII
                                                                    /MS/
                                                                                       :MISC-SIGNALS
     63
         000106
                   0007161
                                                          . MORD:
                                                                    REMS
                                                                                                                W. L
     64
         000110
                      121
                                122
                                                          .ASCII.
                                                                    Z0RZ
                                                                                       :TD-OUTPUT-BUFFER-(TO-QR)
     65
         000112
                   000740
                                                          .WORD
                                                                   REOR
     66
                   000013
                                                RE1LH
                                                                    <.-RE1TBL>/4
     67
68
69
                                                          STORE -
     70
71
                                                          PERFORM SECOND LEVEL PARSING EG. IN THE COMMAND: ST.0 CR
     73
74
                                                          PARSE THE '0'
         000114
                                                ST1::
     76
77
         000114
                   004767
                            000000G
                                                          JSR
                                                                   PC.FIND.
                                                                                       ;LOCATE OPERAND IN COMMAND LINE : OK, CONTINUE
                   103003
                                                          BCC.
                                                                   1$
         000122
                   004767
                            000000G
                                                                   PC,ERR3
                                                          JSR
                                                                                       : 'MISSING OPERAND' ; EXIT
      79
         000126
                   000543
                                                          BR
                                                                   ST1X
     80
         000130
                   004767
                            000000G
                                                                                      CONVERSION SUCCESSFUL TO BINARY
TINVALID NUMERIC VALUE
                                                1$:
                                                          JSR.
                                                                   PC,PACK
     81
         000134
                   103003
                                                          BCC.
     82.000136
                   004767
                            00000AG
                                                          JSR
                                                                   PC.ERR4
     83
         000142
                   000535
                                                          BR
     84
     85
                                                          CONTINUE PARSING.
     86
87
                                                          FIND THE REGISTER MNEMONIC IN THE COMMAND LINE
                                                į
     88
         000144
                   004767
                            000000G
                                                2$:
                                                          JSR
                                                                   PC,FIND.
                                                                                       :LOCATE REG MNEMONIC
         000150
                   103003
                                                          BCC
                                                                   3$
                                                                                       OK, CONTINUE; MISSING OPERAND?
         000152
     90
                   004767
                                                                   PC,ERR3
                            000000G
                                                          JSR
     91
92
         000156
                   000527
                                                                   {\rm ST1} \times
     93
                                                         MATCH THE MNEMONIC FROM THE COMMAND LIFET AGAINST
THE TABLE OF VALID MNEMONICS
     94
     95
96
         000160
                  012700
012702
                            000010
                                                3$:
                                                          MOV
                                                                                       ; NUMBER · OF · TABLE · ENTRIES
                                                                   #ST1LN,R0
     97
         000164
                            0000001
                                                          MOV.
                                                                   #ST1TBL,R2
                                                                                      POINT: TO: TABLE:
MATCH: AGAINST: COMMAND: LINE:
MATCH: WAS: MADE:
     98
99
         000170
                   004767
                            000000G
                                                          JSR.
                                                                   PC.SCAN.
         000174
                   103003
                                                          BCC.
                                                                   4$
    100
         000176
                  004767
                            000000G
                                                          JSR
                                                                   PC, ERR5
                                                                                       : 'INVALID REGISTER MNEMONIC
    i 0 i
         000202
                  000515
                                                        102
    103
    104
    105
                                                         INDICATOR, EG:

ST.0 CR.L.

LOOP-FLAG WILL-BE-SET-IF-INDICATOR IS PRESENT.

JUMP-TO-ROUTINE-TO-LOAD-REGISTER
    106
107
    108
    109
    110
        000204
    111
                  010167
                            000000G
                                               4$:
                                                         MOV.
                                                                   R1.RTHPT
                                                                                      :SAVE POINTER:
:LOOP ON TEST:
:POINT TO ROUTINE
    112-000210
                  004767
                            000000G
                                                         JSR MOV
                                                                   PC.LOOPR.
    113 000214
                  016701
                                                                   RTHPT, R1
                            000000G
                                               STIN:
    114 000220
                  000171
                            000000
                                                         JMP
                                                                   @(R1)
                                                                                      :JUMP TO ROUTINE
                                       Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
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TREG-
         MACRO M1110 27-MAR-80 15:39, PAGE:5-2
                                      Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
    115
    116
    117
                                                        STORE INTO THE MEMORY ADDRESS REGISTERS FOR THE FSA'S
    118
         000224
                  012767
                           000000
                                     000000G·STA::
                                                                 #T$FSAA,APLACE
                                                        MOV
                                                                                   ;SELECT:FSA:A:
    120
        000232
                  000407
                                                        BR
                                                                 STOR
                                                                                    :MOVE SELECTION TO TD.
    121
        000234
                  012767
                           000004
                                     000000G-STB::
                                                        MOV.
                                                                 #T$FSAB,APLACE
                                                                                    ;SELECT:FSA:B
         000242
                  000403
    123
         000244
                  012767
                           000014
                                     000000G-STC::
                                                        MOM
                                                                 #T$FSAC, APLACE
                                                                                    :SELECT-FSA-C
    124
    125
         000252
                  052767
                           020000
                                     000000G.STOR:
                                                        BIS
                                                                 #T$SCLK,APLACE
                                                                                    :START-CLOCK
    126
        999269
                  016767
                           000000G-175360
                                                                                    :MOVE TO CONTROL REG :
:MOVE VALUE FROM COMMAND LINE :
                                                        MOV-
                                                                 APLACE, TD$CTW.
    127
         000266
                  016767
                           000000G-176362
                                                        MOV
                                                                 BINWD, TD$TAW.
    128
        000274
                  000454
                                                                                    ; CHECK · LOOP · FLAG
                                                                 STLP
    129
     130
                                                        STORE · INTO · INPUT · BUFFER · MAR
    131
    132
        000276
                  012767
                            000040
                                     176360
                                              STI::
                                                        MOV:
                                                                                    :ENABLE · INTERFACE · AND · CONTROL ·
                                                                 #T$ICD,TD$CTW
        000304
000312
    133
                  012767
                           000024
                                    176362
                                                        MOV-
                                                                 #T$IBAR,TD$TAW
    134
                                                                                                                        APP 4
                  016767
                           000000G-176364
                                                                 BINWD. TD$TDW
         000320
                  000442
                                                                                    :TEST-LOOP-FLAG
    136
                                                        STORE · INTO · THE · OUTPUT · BUFFER · MAR
    138
    139
        000322
                  B12767
                           000040
                                     176360
                                              STO::
                                                        MOV
                                                                 #T$ICD, TD$CTW
                                                                                   ;ENABLE · INTERFACE · AND · CNTL
;SELECT · OUTPUT · BUFFER ·
    140
        000330
                  012767
                           000032
                                     176362
                                                        MOV-
                                                                 #T$OBWA, TD$TAW
    141 000336
                  016767
                           000000G-176364
                                                        MOV.
                                                                 BINWD.TD$TDW
                                                                                    :MOVE · WORD · TO · TRANSFER · REG
    142
        .000344
                  000430
                                                                 STLP
    143
    144
                                                                                                                emer y
                                                        STORE INTO THE BYTE TRANSLATOR MAR
    145
                                                                                                                F 5.
    146
        000346
                  012767
                           000040
                                     176360
                                              STBT::
                                                       MOV
                                                                                    :ENABLE : INTERFACE : AND : CONTROL : SELECT : BYTE : TRANSLATOR :
                                                                 #T$ICD,TD$CTW
    147
        000354
                  012767
                           000030
                                     176362
                                                       MOv.
                                                                 #T$BTAR,TD$TAW
    148
        000362
                  016767
                           000000G · 176364
                                                                 BINWD.TD$TDW.
                                                                                    :TRANSEER DATA WORD
    149
         000370
                  000416
                                                        BR
                                                                 STLP
    150
    151
                                                        STORE · INTO · THE · SECTOR · COUNTER
    152
    153
        000372
                  012767
                           000040- 176360
                                              STSC::
                                                                                    :ENABLE · INTERFACE · AND · CONTROL
:SELECT · SECTOR · COUNTER ·
                                                       MOV.
                                                                 #T$ICD,TD$CTW
        000400
000406
                  012767
016767
    154
                           000022.
                                     176362
                                                        MOV-
                                                                 #T$SC,TD$TAW.
BINWD,TD$TDW.
    155
                           000000G-176364
                                                                                    :TRANSFER DATA WORD
        000414
                  000404
    157
    158
                                                       STORE INTO THE CONTROL REGISTER
                                                                                                    - -- A-95
    160 000416
                  016767
                           000000G-176360
                                                       MOV
                                              STOR::
                                                                 BINWD, TD$CTW-
STLP
                                                                                    :MOVE TO CONTROL REG
    161
        000424
                  000400
    162
    163
    164 000426
                  032767
                           000000G 000000G STLP:
                                                       BIT
                                                                 #LOOP,BASE
                                                                                    ;LOOP·FLAG·ON
    165
        000434
                 001267
                                                                 STIN
                                                                                    :YES, REPEAT
    166
    167 000436
                                              STIX:
                                                                                    :KILL-AST (IF THERE UGS ONE)
    168 000436
                  004767
                           000000G
                                                                 PC.KILL
                                                        JSR
    169 000442
                 000167
                           000000G
                                                       JMP
                                                                 COMXX-
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"是对人的"。

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TREG-
               0.M1110 27-MAR-80 15:39 PAGE 6
                                        5:39 PAGE 6
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     173
                                                            READ
     174
                                                            PERFORM SECOND LEVEL PARSING
                                                            EG. IN THE COMMAND:
                                                            PARSE - THE - 1 CR 1
     178
     180
         000446
                                                  RE1::
     181
         000446
000452
                   004767
103003
                             000000G
                                                            JSR
                                                                      PC.FIND
                                                                                          LOCATE THE REGISTER MNEMONIC
                                                            BCC
                                                                                          :FOUND ONE
         000454
                   004767
                             000000G
                                                                                          : MISSING OPERAND
                                                            JSR
                                                                      PC, ERR3
     184
         000460
                   000574
                                                                      RE1X
     185
     186
                                                            MATCH THE REGISTER MNEMONIC FROM THE COMMAND LINE
                                                            AGAINST A TABLE OF VALID MNEMONICS.
     188
                   012700
         000462
                                                                      #RE1LN,R0
#RE1TBL,R2
     189
                             000013
                                                                                         :NUMBER OF TABLE ENTRIES
:POINT TO TABLE
:MATCH AGAINST COMMAND LINE
         000466
     190
                   012702
                             0000401
                                                            MOV.
     191
         000472.
                   004767
                             000000G
                                                            JSR
                                                                     PC.SCAN
     192.000476
                    103003
                                                            BCC
                                                                     2$
                                                                                          : MATCH - WAS - MADE
     193 000500
                   004767
                             000000G
                                                            JSR
                                                                      PC, ERRS
                                                                                         : "INVALID REGISTER MNEMONIC"
         000504
                   000562
                                                                                                               · ## - 5:
     195
                                                           SAVE THE POINTER TO THE ROUTINE ASSOCIATED, WITH THE REGISTER: R1 -> ROUTINE ADDRESS: CALL ROUTINE TO SCAN THE COMMAND LINE FOR A LOOP
     196
     197
     199
                                                            INDICATOR: EG:
     200
                                                           TABLETION: EG.

XRE-CR.L.

LOOP-FLAG-WILL-BE-SET-IF-INDICATOR-IS-PRESENT:
JUMP-TO-ROUTINE-TO-READ-REGISTER.
     201
     202
    203
    204 000506
205 000512
                   010167
                             000000G
                                                  2$:
                                                            MOV-
                                                                      R1.RTHPT
                                                                                         ;SAVE ROUTINE POINTER:
;LOOP ON TEST?
;POINT TO ROUTINE;
                   004767
                             000000G
                                                                     PC.LOOPR
         000516
                   016701
                             000000G
                                                 REIN:
                                                           MOV.
                                                                     RTHPT, R1
    207
208
         000522
                   000171
                                                            JMP -
                                                                     @(R1)
                                                                                          :GO THERE
    210
211
212-000526
                                                           READ FSA · A · MEMORY · ADDRESS · REGISTER
                                                  REAA::
    213 000526
                   012767
                             000000
                                      176368
                                                           MOV:
                                                                      #T$FSAA,TD$CTW ;SELECT.FSA.A
    213 000526
214 000534
215 000548
216
217
218
219 000542
220 000542
221 000550
                   016701
                             176372
                                                            MOV-
                                                                      TD$TAR,R1
                                                                                         :GET-REG CONTENTS
                   000523
                                                                     REPUT.
                                                                                         :PRINT.
                                                           READ FSA B MEMORY ADDRESS REGISTER
                                                 REBA::
                   012767
016701
                                                                                        SELECT FSA B
                                                                      #T$FSAB,TD$CTW
                             000004
                                                                      TD$TAR,R1
                             176372
    222
223
224
         000554
                                                                     REPUT-
                                                           READ FSA · C · MEMORY · ADDRESS · REGISTER
    226 000556
                                                 RECA::
                                        000556
                  012767
                             000014
                                       176360
```

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TREG-
         MACRO-M1110 27-MAR-80 15:39 PAGE-6-1
                                        Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
                                                                     TD$TAR,R1
    228.000564 016701
                             176372.1
                                                           MOV.
                                                                                         :GET-REG CONTENTS
    229
         000570
                   000507
                                                           BR
                                                                     REPUT.
                                                                                         :PRINT
     230
                                                                                                        20 SH 70
    231
232
                                                           READ INPUT BUFFER MEMORY ADDRESS REGISTER
     233
         000572
                                                 REIA::
                                                                     #T$ICD,TD$CTW
#T$IBAR,TD$TAW
     234
         000572
                   012767
                             000040
                                       176360
                                                           MOV-
                                                                                         :SELECT · INTERFACE · AND · CONTROL·
:SELECT · INPUT · BUF · REG ·
:GET · REG · CONTENTS ·
     235 000600
                   012767
016701
                             000024
                                       -176362
                                                           MOv.
     236
         000606
                             176374
                                                           MOV:
                                                                     TD$TDR.R1
    237
238
239
         000612
                   000476
                                                                     REPUT-
                                                           READ OUTPUT BUFFER MEMORY ADDRESS REGISTER
     240
     241
          000614
                                                 REOA::
     242.000614
                    012767
                             000040
                                        176360
                                                           MOV.
                                                                     #T$ICD,TD$CTW
                                                                                         :SELECT: INTERFACE: AND: CONTROL:
     243
         000622
                   012767
                             000034
                                        176362
                                                                     #T$OBRA, TD$TAW
                                                           MOV.
                                                                                         :SELECT.OUTPUT.BUFFER.MAR.
:GET.REG CONTENTS.
     244
         000630
                   016701
                             176374
                                                           MOV.
                                                                     TD$TDR,R1
     245
          000634
                   000465
                                                           BR
                                                                     REPUT-
     246
     247
                                                           READ BYTE TRANSLATOR MEMORY ADDRESS REGISTER
     248
     249
          000636
                                                 RETA::
         000636
000644
                   012767
012767
     250
                             000040
                                        176360
                                                                                         SELECT INTERFACE AND CONTROL SELECT BYTE TRANSLATOR SELECT BYTE TRANS MAR
                                                                     #T$ICD,TD$CTW
#T$BTAR,TD$TAW
     251
                             000030
                                       +176362
                                                           MOV.
          000652
                   016701
                              176374
                                                           MCV:
                                                                     TD$TDR,R1
     253
254
         000656
                    000454
                                                           BR
                                                                     REPUT-
                                                                                         :PRINT
                                                           READ SECTOR COUNTER
     255
     256
257
          000660
                                                 RESC::
     258
                   012767
012767
         000660
                             000040
                                        176360
                                                                     #T$ICD,TD$CTW
                                                                                         259
          000666
                             000022
                                        176362
                                                           MOV.
                                                                     #T$SC, TD$TAW
     260
         000674
                   016701
                             176374
                                                           MOV.
                                                                     TD$TDR,R1
     261
262
         000700
                   000443
                                                                                         : AND PRINT
                                                                     REPUT
                                                           READ CONTROL REGISTER
     264
265
                                                                                                       1.
3.
         000702
                                                 RECR::
         000702
     266
                   016701
                                                                                         :LOAD · CONTRÔL · REG · :PRINT · IT ·
                             176370
                                                                     TD$CTR,R1
     267
          000706
                   000440
                                                                     REPUT-
     269
270
                                                           READ - STATUR - REGISTER -
         000710
                   016701
                             176376
                                                 RESW::
                                                           MOV. TD$SW.R1 ; LUHD: STHTOS: KEG
BR REPUT: PRINT: IT: WT.
READ: MISC: CONTROL: SIGNALS***
                                                           MOV.
                                                                     TD$SW.R1
                                                                                         :LOAD · STATUS · REG
     272 000714 000435
     273
     274
     275
     276 000716
                                                 REMS::
    277 000716
278 000724
279 000732
                   012767
                             000040
                                        176360
                                                           MOV.
                                                                     #T$ICD, TD$CTW.
                                                                                         ;SELECT: INTERFACE: AND: CONTROL:
;LOAD: MISC: REG:
;READ: MISC: REG:
                   012767
                             000030
                                        176362
                                                           MOV.
                                                                     #T$BTAR,TD$TAW
                   016701
                             176374
                                                           MOV.
                                                                     TD$TDR,R1
    280 000736
281
                                                                     REPUT
                                                                                           The modern of the transfer of the transfer of
     282
                                                           PRINT TD OUTPUT TO QR
    283
    284 000740
                                                 REQR::
                                        Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3
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TREG-0.M1110 27-MAR-80 15:39 PAGE 6-2 Approved For Release 2005/07/12 LIA-RDP85-00514R000200020001-3 285 000740 016701 176344 MOV. TD\$OAR,R1 :READ · OUTPUT · AVAILABLE · REG 286 000744 032701 ; IS OUTPUT AVAILABLE ; YES, PRINT ; EMPTY 100000 BIT #T\$OUTA,R1 287 000750 001006 BNE 1\$ 288 000752 046505 #"EM.PRINT 012767 000000G MGV :EMPIY: :WRITE:MESSAGE: 000760 004767 289 000000G PC, CONSOL RELP **JSR** 290 000764 000426 BR :TEST-LOOP-291 000766 292 000772 POINT TO PRINT LINE 012705 000000G MOV #PRINT, R5 016701 004767 004767 READ OUTPUT, ++ 176346 000000G TD\$OTR,R1 293 000776 PC.UNPK PC.CONSOL RELP JSR :CONVERT 294 001002 000000G ISR :PRINT.IT. :TEST.LOOP 295 296 001006 000415 PRINT-REGISTER-CONTENTS 298 299 001010 001010 300 032767 000000G · 000000G BIT #ONCE, BASE ; CONTENTS - ALREADY - PRINTED - ONCE 001016 YES, SKIP SUBSEQUENT PRINTINGS
SET FLAG FOR LINE PRINTED
SET UP POINTER TO PRINT LINE
CONVERT
URITE TO TTA 001011 BNE RELP #ONCE,BASE #PRINT,R5 302.001020 052767 000000G - 000000G BIS 303 001026 304 001032 012705 000000G MOV 004767 000000G JSR PC.UNPK :WRITE-TO-TTØ 001036 004767 000000G **JSR** PC.CONSOL 306 001042 307 032767 :LOOP·FLAG·ON: :YES, REPEAT· 000000G-000000G-RELP: #LOOP,BASE 308 001050 001222 BHE REIN 309 001052 001052 310 311 042767 000000G 000000G 00000G BIC :CLEAR · LOCAL · FLAG · ;KILL · AST · (IF · THERE · WAS · ONE) #ONCE,BASE 312-001060 313 001064 314 004767 JSR PC.KILL 000167 JMP COMXX: 315 000001 .END

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MACRO-MI.10 27-MAR-80 15:39 PAGE-6-3
                                          Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
SYMBOL . TABLE
ALUCKE = 040000
                               BYTE4 = 000004
                                                              BYTE91= 000133

 - ñññ 1 44

                                                                                                                           Q$QL
                                                                                                                                  = 0000043
ALU0E - = - 004000
                               BYTE40=:000050
                                                             BYTE92=-000134
                                                                                            ONCE -
                                                                                                    = · ***** GX
                                                                                                                           Q$QLA - = 000053
APLACE= · ***** GX
                               BYTE41= 000051
                                                             BYTE93 = . 000135
                                                                                                    =·***** GX-
                                                                                            PACK -
                                                                                                                           Q$QLB:=:000054
Q$QLR:=:000001
A01 = 010000
BASE = ******** GX
                               BYTE42=-000052
                                                              BYTE94= 000136
                                                                                            PLB.
                                                                                                    = 0000010
                               BYTE43=.000053
                                                              BYTE95=-000137
                                                                                            PLC.
                                                                                                    = 000020
                                                                                                                           Q$QW = 000042
BIHWD - = - ***** GX
                               BYTE44= 000054
                                                              BYTE96= 000140
                                                                                            PLD.
                                                                                                    = 000030
                                                                                                                           ₫$RDCD= 000005
BITVAL = 000000
                               BYTE45= 000055
                                                             BYTE97=-000141
                                                                                            PLRWR - = - 000200
                                                                                                                           Q$RDMD=-000006
BIT0 = 000001
                               BYTE46= 000056
                                                             BYTE98= 000142
                                                                                            PLR.EN= 000200
                                                                                                                           Q$REBK=-001000
Q$RNC-=-006000
Q$RSC-=-004000
BIT1 = 000002
                               BYTE47 = . 000057
                                                              BYTE99= 000143
                                                                                            PRINT -- ********
QR$CR1 -- 176420
BIT10 = 002000
                               BYTE48= 0000060
                                                              BYTVAL = 000144
BIT11 = 004000
                               BYTE49= 000061
                                                             CBKALL = 001000
CBKCLK = 000400
                                                                                            QR$CR2= 176422
                                                                                                                           Q$RSET= 000010
Q$SM = 100000
BIT12 -- 010000
                               BYTE5 - 000005
                                                                                            QR$LBR= 176424
Q$ATTN= 000100
BIT13 = 020000
                              BYTE50 = . 000062
BYTE51 = . 000063
                                                              CHOBRE = 100000
                                                                                                                           Q≸SP
                                                                                                                                     000120
BIT14 = 040000
                                                              жжжжж = · XXM00
                                                                                            Q$BCL - = . 000001
                                                                                                                           Q$SP2 -=
                                                                                                                                     000340
BIT15 = 100000
                               BYTE52= 000064
                                                             CONSOL = ****** GX
                                                                                            0$CCCP= 000040
0$CHB = 000400
                                                                                                                           REAA
                                                                                                                                     000526PG
                                                                                                                                                    002
BIT2 - 000004
                               BYTE53 - 000065
                                                              CPCCEN=-010000
                                                                                                                                     000542RG
       = 000010
                                                                                                                                                    002
BIT3
                               BYTE54= 000066
                                                              CPREAD = 040000
                                                                                            Q$CHRL= : 000200
                                                                                                                                     000556RG
                                                                                                                           RECA
                                                                                                                                                    002
                               BYTE55= 000067
                                                             CPWRTE = 020000
CSADRD = 000004
                                                                                            Q$CLR·=·000040
Q$CNC·=·030000
Q$CP·=·000060
                                                                                                                                     000702RG
000572RG
                              BYTE56= 000070
BYTE57= 000071
                                                                                                                           RECR
                                                                                                                                                    .002
BIT5
       = 000040
                                                                                                                           REIA
        = 000100
                                                                                                                                                    โดคว
                                                             CSEQCI = 100000
CSOE = 000040
BIT6
                                                                                                                           RE IN
RELP
                                                                                                                                     000516R
                                                                                                                                                    002
        - 000200
                               BYTE58 = . 000072
                                                                                            Q$CPCC=-000010
                                                                                                                                     001042R
000716RG
                                                                                                                                                    002
        = 000400
                               BYTE59= 000073
                                                              CSWRTE = . 000100
AIT8
                                                                                            Q$CP2·=·000260
Q$CSC·=·010000
                                                                                                                           REMS
                                                                                                                                                    992
        - 001000
i-1T9
                               BYTE6 = 000006
                                                              DBR.RD= 000001
                                                                                                                                    000614RG
001010R
                                                                                                                           REOA
                                                                                                                                                    002
BYTE0
       = 0000000
                               BYTERM= 000074
                                                             DB$CPP=-001457
DB$SPT=-000026
                                                                                            Q$CSEL = . 000360
                                                                                                                           REPUT.
                                                                                                                                                    002
BYTE1 = 0000001
                               BYTE61= 0000075
                                                                                            Q$CSET= 000002
                                                                                                                                     AAAZ4ARG
                                                                                                                                                    002
BYTE10= 000012
                               BYTE62= 000076
                                                              DB$TPC= 000023
                                                                                            Q$CSP - = - 020000
                                                                                                                           RESC
                                                                                                                                     000660RG
                                                                                                                                                    002
BYTE11=:000013
                               BYTE63= 000077
                                                              DISPGS= 100000
                                                                                            Q$DMA - = - 000001
                                                                                                                                     000710RG
                                                                                                                           RESW
BYTE12= 000014
                               BYTE64= : 000100
                                                             DMAAWR = . 000005
DMARRD = . 000003
                                                                                            Q$ENBK = . 040000
                                                                                                                           RETA
                                                                                                                                     000636RG
                                                                                                                                                    002
BYTE13= 000015
                               BYTE65= 000101
                                                                                            Q$ENOP = . 020000
                                                                                                                           RE1
                                                                                                                                     000446RG
                                                                                                                                                    002
BYTE14= 0000016
                               BYTE66=-000102
                                                              DMARWR = - 000004
                                                                                            Q$FAL -- 004000
                                                                                                                           RE1LN -=
BYTE15= 000017
                               BYTE67= 000103
                                                              ENBR: = 010000
                                                                                            Q$FC = 000045
                                                                                                                           RE1TBL -
                                                                                                                                     000040RG
                                                                                                                                                    002
BYTE16= 0000020
                               BYTE68=-000104
                                                             ERR3
                                                                    = - *****
                                                                                            Q$FO - 000044
                                                                                                                           RE1X
                                                                                                                                     001052R
BYTE17=-000021
                               BYTE69= 000105
                                                                                                                           RGQ.EN= 000200
                                                             FPP4
                                                                    =-жжжжжжж <u>Б</u>Х-
                                                                                            Q$FP - 000046
BYTE18= 0000022
                               BYTE7 = 000007
                                                                                            Q$HBF·= 000002
Q$ICP·= 000006
                                                             ERR5
                                                                     = · ***** GX ·
                                                                                                                           RG0.VA=.020000
RTNPT.=.******* GX
BYTE19= 000023
BYTE2 = 000002
                               BYTE70= 000106
                                                              FIND.
                                                                    = · ******** GX ·
                               BYTE71= 000107
BYTE72= 000110
                                                                    = · ****** GX ·
                                                                                            Q$IHB -- 000003
                                                              KILL
                                                                                                                                  = ******
                                                                                                                           SCAN
BYTE20= 000024
                                                                                            Q$IHRL=.000002
Q$IMRP=.000007
                                                             LOC:EN= 000100
                                                                                                                           SEQ.CI=-000010
BYTE21=-000025
                               BYTE73= 000111
                                                             LOC.WA=-040000
LOC.WB=-100000
LOOP- =-********* GX-
LOOPR-=-********* GX-
                                                                                                                           STA-
                                                                                                                                     000224RG
                                                                                                                                                    002
BYTE22= 000026
                               BYTE74= 000112
                                                                                            Q$LBD -- 001000
                                                                                                                                     000234RG
BYTE23= 000027
                                                                                                                                                    002
                               BYTE75= 000113
                                                                                            Q$LBDP=:001001
                                                                                                                           STBT
                                                                                                                                     000346RG
                                                                                                                                                    002
BYTE24= 000030
                               BYTE76= 000114
                                                                                            Q$LBP -- 000001
                                                                                                                           STC
                                                                                                                                     000244RG
                                                                                                                                                    002
BYTE25=-000031
                               BYTE77= 000115
                                                                                            Q$LDCD=-000003
O$LDMD=-000004
Q$LDPP=-002000
                                                             MAREN 1 = - 0000001
                                                                                                                           STOR
                                                                                                                                     000416RG
                                                                                                                                                    002
BYTE26= 000032
                               BYTE78= 000116
                                                             MAREN2 = . 004000
                                                                                                                           STI
                                                                                                                                     000276RG
                                                                                                                                                    992
BYTE27= 000033
                              BYTE79=.000117
BYTE8 =.000010
                                                              MARLOD = 010000
                                                                                                                           STIN
                                                                                                                                     000214R
BYTE28 = - 0000034
                                                             MAROUT=-000002
                                                                                            Q$LHP - = · 010000
                                                                                                                           STLP
                                                                                                                                     999426R
                                                                                                                                                    882
                                                             MAR.LO= 002000
MAR.OU= 000040
                               BYTE80= 000120
BYTE29= 0000035
                                                                                            Q$MNC -- 140000
Q$MR - - 000052
Q$MRP -- 000040
                                                                                                                           STO
                                                                                                                                    _000322RG
                                                                                                                                                    .002
BYTE3 = 000003
                               BYTE01= 000121
                                                                                                                           STOR
                                                                                                                                                    992
BYTE30= 0000036
                               BYTE82= 900122
                                                             MBKALL = 001000
MBKCLK = 000400
                                                                                                                                     000372RG
000114RG
                                                                                                                           STSC
                                                                                                                                                    002
BYTE31 = 000037
BYTE32 = 000040
                               BYTE83= 000123
                                                                                            Q$MRP2=-000240
                                                                                                                           ST1
                                                                                                                                                    002
                               BYTE84= 000124
                                                             MMADRD = . 000100
                                                                                            0$MSC - = - 040000
                                                                                                                           ST1LN -=
BYTE33= 000041
                                                             MMLEFT= 000002
MMOE = 000004
                               BYTE85 = : 000125
                                                                                            Q$MSET= 000004
                                                                                                                                     AAAAAAAAA
                                                                                                                           ST1TBL -
                                                                                                                                                    002
BYTE34= 0000042
                               BYTE86= 000126
                                                                                            Q$MSP - - 100000
                                                                                                                           ST1X
                                                                                                                                     000436R
                                                                                                                                                    002
BYTE35= 000043
                              BYTE87= 000127
                                                             MMWRTE = . 000010
                                                                                            Q$NCLK= 176000
Q$PP = 1000100
Q$PPSW= 000320
Q$PPSW= 000300
Q$PP2 = 000300
Q$QHLT= 000013
                                                                                                                           S$CLR
BYTE36 = . 000044
                              BYTERR= 000130
                                                             MNOBRE = 100000
                                                                                                                                   = 0000001
= 000005
                              BYTE89= 000131
                                                             MREN1 = 000001
MREN2 = 020000
                                                                                                                                               There may
DYTE38= 0000046
                              BYTE9 = 000011
                                                                                                                                   = 000006 _
BYTE39 - 000047
                              BYTE90 = . 000132
                                                             MSYN - 000040
                                                                                                                                  = .000004
                                                                                                                           S$0X
                                          Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3
```

TREG-

```
TREG M 1110 27-MAR-80 15:39 PAGE 6-4
SYMBOL TA

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S$SR- = 0000007
                                T$IBAR= 0000024
                                                                 WORD15= 000036
                                                                                                 WORD44= 000130
                                                                                                                                 WORD73 = . 000222
S$S1 = 0000010
S$S2 = 000014
                                T$IBE - - 020000
T$IBF - - 040000
                                                                WORD15 = 000040
WORD17 = 000042
                                                                                                 WORD45= 000132
                                                                                                                                 WORD74= 000224
                                                                                                 WORD46= 000134
                                                                                                                                 WORD75= 000226
TD$CTR=-176370
                                T$ICD - = - 000040
                                                                 MORD 18 = - 000044
                                                                                                 WORD47 = 000136
                                                                                                                                 WORD76= 000230
TD$CTW≕-176360
                                 T$MODE = - 004000
                                                                 WORD19= 0000046
                                                                                                 WORD48 = . 000140
                                                                                                                                 WORD77 = .000232
TD$INL= 004000
                                T$0B. = 0000036
                                                                 WORD2 - - 000004
                                                                                                 WORD49= 000142
WORD5 = 000012
                                                                                                                                 WORD78= 000234
TD$MEM= 000270
                                T$0BE - = 004000
T$0BF - = 010000
                                                                 WORD20= 000050
                                                                                                                                 WORD79= 000236
TD$0AR= · 176344
                                                                 WORD21=-000052
                                                                                                 WORD50= 000144
                                                                                                                                 WORD8 = 000020
TD$0TR=-176346
                                T$08RA= · 000034
                                                                WORD22=-000054
WORD23=-000056
                                                                                                 WORD51 = 000146
                                                                                                                                 WORD80= 000240
TD$QRD=-000274
TD$SW-=-176376
TD$TAR=-176372
                                 T$0BWA= 000032
                                                                                                 WORD52= 000150
                                                                                                                                 WORD81= 000242
                                T$0UTA= 100000
T$RBD0= 000200
                                                                 WORD24= 000060
                                                                                                 WORD53= 000152
                                                                                                                                 WORD82= 000244
WORD83= 000246
                                                                 WORD25=-000062
                                                                                                 WORD54= 000154
TD$TAW=:176362
                                T$RHB - = - 000040
                                                                 WORD26=-000064
                                                                                                 WORD55= 000156
                                                                                                                                 WORD84= 000250
TD$TDR=-176374
                                T$RSET= 040000
                                                                 WORD27= 000066
                                                                                                WORD56= 000160
WORD57= 000162
                                                                                                                                 WORD85= 000252
TD$TDW≃-176364
                                T$SC: =:000022
                                                                 WORD28= 000070
                                                                                                                                 WORD86= 000254
WORD87= 000256
T$AD = 000020
T$BA = 000002
                                T$SCLK= 020000
                                                                 WORD29= 000072
WORD3 = 000006
                                                                                                 WORD58= 000164
                                 T$SEG1 = 000000
                                                                                                WORD59 - 000166
WORD6 - 000014
                                                                                                                                 WORD88= 000260
       = 000010
T$BD
                                T$SEG2 = . 0000001
                                                                 WORD30= 000074
                                                                                                                                 WORD89= 000262
WORD9 = 000022
T$BSO -= 100000
T$BT -= 000020
                                 T$SEG3= 0000002
                                                                WORD31=-000076
WORD32=-000100
                                                                                                 WORD60= 000170
                                 T$SO
                                        = 000001
                                                                                                WORD61= 000172
WORD62= 000174
                                                                                                                                 WORD90= 000,264
T$BTAR = . 000030
                                T$UBUS= 100000
T$1CLK= 000400
                                                                 WORD33--000102
                                                                                                                                 WORD91= 0002266 T
WORD92= 000270
T$BTD - = 002000
T$CD - = 000100
T$CLK - = 002000
                                                                 WORD34= 000104
                                                                                                 WORD63= 000176
                                                                WORD35= 000106
WORD36= 000110
                                                                                                                                 WORD92= 000270
WORD93= 000272
WORD94= 000274
WORD95= 000276 ↔
WORD96= 000300
                                 T$8BEN= 000020
                                                                                                 WORD64= 000200
                                UBD: IN= 000020
                                                                                                WORD65= 000202
WORD65= 000204
T$DISK= 000200
                                UNPK - ****** GX
                                                                 WORD37=-000112
T$DRD - = - 0000004
                                WORD0 - 000000
                                                                WORD38=-000114
                                                                                                 WORD67= 000206
T$EMEM= 010000
                                WORD1 = 0000002
                                                                WORD39= 000116
WORD4 = 000010
                                                                                                 WORD68= 000210
                                                                                                                                 WORD97=-000302
T$FSAA= 000000
T$FSAB= 000004
                                WORD10= 000024
                                                                                                WORD69= 000212
WORD7 = 000016
                                                                                                                                 WORD90 - 000304
                                WORD11=-000026
                                                                 WORD40= 000120
                                                                                                                                 WORD99 = 000306:
T$FSAC = . 000014
                                WORD12= · 000030
                                                                WORD41 = . 000122
                                                                                                WORD70= 000214
                                                                                                                                 WRDVAL = . 000310
T$FSB2=-000010
                                WORD13= 0000032
                                                                WORD42=-000124
WORD43=-000126
                                                                                                 WORD71=-000216
                                                                                                                                 XTREAD = . 001000
T$IB: =:000026
                                WORD14=-000034
                                                                                                WORD72= 000220
                                                                                                                                 XTWRTE = . 000400
. ABS:
          000000
                         999
          000000
                         001
TREG
          001070
                         002
ERRORS DETECTED:
                        0
VIRTUAL MEMORY-USED: 3266 WORDS- (-13 PAGES)
DYNAMIC MEMORY: 3860 WORDS ( 14
ELAPSED TIME: 00:00:45
TREG.TREG/-SP=C20.1JIM.C20.1JTREG
                       3860 WORDS: ( 14 PAGES)
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A STATE OF THE PARTY OF THE PAR

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0-M1110 27-MAR-80 15:37 PAGE 5
Approved For Release 2005/07/11 CIA-RDP85-00514R000200020001-3
TMEM- · · · M
                                                           . WITLE . . WEM
       23
         000000
                                                           .PSECT THEM
                                                           .LIST
                                                                    MEB.
      456789
                                                           TERM DETECTOR MANUAL: DEBUGGING AIDS -
                                                           MEMORY EXERCISES.
                                                           COMMANDS:
      10
                                                           LD
                                                                    LOAD MEMORIES.
      11
                                                           PR
                                                                     PRINT MEMORY CONTENTS
      12
      13
                                                           ONCE A COMMAND HAS BEEN EXECUTED (OR AN ERROR ENCOUNTERED) THIS MODULE RETURNS CONTROL TO THE MODULE TMAIN AT LOCATION COMXX.
      14
15
      16
17
      18
                                                           TABLE OF VALID MEMORY MNEMONICS AND THE ADDRESSES OF THETR
     19
20
21
22
23
                                                           ASSOCIATED ROUTINES.
         000000
                                                 LD1TBL::
         000000
                                 115
                                                           .ASCII
                                                                     ZAMZ
                                                                                         #FSA-A
         000002
000004
                   000332
                                                           .WORD
                                                                    LDAM
     24
                       102
                                 115
                                                           .ASCII-
                                                                     ZBMZ
                                                                                         :FSA·B
     25
         000006
                   000366
                                                           .WORD
                                                                    LDBM
     26
27
28
         000010
                       103
                                 115
                                                           .ASCII
                                                                                         :FSA-C
         000012
                   0004221
                                                           .WORD.
                                                                    LDCM
                       111
                                 102
                                                                     ZTB2
                                                                                         : INPUT BUFFER
         000016
                   000456
                                                           .WORD
                                                                     LDIB
     30
31
         000020
                       117
                                 102
                                                           .ASCII
                                                                                         :OUTPUT BUFFER
         000022
                   000654
                                                                    LDOB
     32
33
34
35
36
37
         000024
                       182
                                 124
                                                           .ASCII
                                                                    /BT/
                                                                                         :BYTE · TRANSLATOR
         000026
                   001112
                                                           .WORD
                                                                    LDBT
                   000006
                                                 LD1LH-
                                                                     <.-LD1TBL>/4
                                                           PRINT.
         000030
000030
     38
39
                                                 PR1TBL::
                       101
                                 115
                                                           .ASCII
                                                                     ZAMZ
                                                                                        ;FSA-A
     40
         000032
                   001650
                                                           .WORD
         000034
000036
     41
                       102
                                 115
                                                           .ASCII
                                                                     ZBMZ
                                                                                        :FSA · B
     42
                   001704
                                                           .WORD
                                                                    PRBM
         000040
                       103
                                 115
                                                           .ASCII
                                                                                        :FSA-C
     44
45
         000042
                   0017401
                                                           .WORD
.ASCII
                                                                    PRCM
         000044
000046
                                 102
                                                                     /TR/
                                                                                        : INPUT-BUFFER
     46
                   001774
                                                           .WORD
                                                                    PRIB
     47
         000050
                      117
                                 102
                                                           .ASCII
                                                                     /QB/
                                                                                        :OUTPUT BUFFER
     48
         000052
                   0020723
                                                           .WORD.
                                                                    PROB
     49
50
         000054
                      102
                                                                    /BT/
                                                                                        ;BYTE · TRANSLATOR
         000056
                   002210
                                                           .WORD
                                                                    PRBT
     51
52
53
54
55
56
57
                   000006
                                                 PRILH-
                                                                     <.-PRITBL>/4
                                                          LOAD.
        000060
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TMEM-----MACRO-M1110 27-MAR-80 15:37 PAGE 5-1
Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
             58 000060
                                        004767
                                                             000000G
                                                                                                                                              PC.FIND
                                                                                                                                                                                        :LOCATE - MEMORY - MNEMONIC - IN - COMMAND - LINE
                                                                                                                                                                                                                                                                                     THE WAY WAS
            59
                   000064
                                        103004
                                                                                                                           BCC
                                                                                                                                               1$
                                                                                                                                                                                        OK, CONTINUE
                                                                                                                                              PC, ERR3
                    000066
                                        004767
                                                             000000G
                                                                                                                           JSR.
                                                                                                                                                                                        ; 'MISSING OPERAND:
            61
                   000072
                                        000167
                                                                                                                           JMP
                                                                                                                                                                                        : FXIT-
            62
            63
                   000076
                                        012700
                                                             000006
                                                                                                      15:
                                                                                                                           MOM
                                                                                                                                               #LD1LN,R0
                                                                                                                                                                                        ; NUMBER · OF · TABLE · ENTRIES
            64
                   000102
                                        012702
                                                             000000
                                                                                                                          MOV.
                                                                                                                                               #LD1TBL,R2
                                                                                                                                                                                        :POINT TO TABLE
            65
                   000106
                                        004767
                                                             000000G
                                                                                                                           JSR.
                                                                                                                                               PC.SCAN.
                                                                                                                                                                                        :MATCH - AGAINST - COMMAND - LINE
            66
67
                   000112
                                        103004
                                                                                                                           BCC
                                                                                                                                               2$
                                                                                                                                                                                       :MATCH:WAS:MADE:
: 'INVALID:MEMORY:MNEMONIC'
                    000114
                                        004767
                                                             000000G
                                                                                                                           JSR
                                                                                                                                               PC, ERR6
            68
                    000120
                                        000167
                                                             001220
                                                                                                                           TMP
                                                                                                                                              LDIX
            69
70
71
72
                                                                                                                          SAVE-POINTER TO-ROUTINE-ASSOCIATED-WITH-THE-MEMORY-MNEMONIC-
SCAN-THE-REMAINDER-OF-THE-COMMAND-LINE-FOR CONTROL-INFORMATION:
            73
74
75
76
77
78
79
                                                                                                                                 START ADDRESS ONLY, REPEAT PROMPT FOR EACH MEMORY LOCATION FROM THE START ADDRESS FORWARD, NB: END OF MEMORY (AS DETECTED BY THE OMAIN SUBBROUTINE PDATA) OR A <CR > RESPONSE TO THE PROMPT, UTILITY TERMINATE THE LOOP
                                                                                                                                  WILL TERMINATE THE LOAD.
                                                                                                                                  >LD-0B-0
                                                                                                                                 START ADDRESS, LOOP INDICATOR, LOOP ON THE LOADING OF
                                                                                                                                  THIS ONE MEMORY LOCATION ONLY.
             80
                                                                                                                                  >LD.OB.0 L
            81
82
83
                                                                                                                                 START ADDRESS, END ADDRESS, NO LOOP, ISSUE ONLY ONE PROMPT AND FILL MEMORY (BETWEEN START AND END ADDRESSES)
                                                                                                                                  WITH THIS VALUE.
                                                                                                                                  >LD-08-0 6
            85
                                                                                                                                 START ADDRESS, END ADDRESS, LOOP INDICATOR: ISSUE ONLY ONE PROMPT AND LOOP ON THE LOADING OF MEMORY (BETWEEN START AND END ADDRESSES) WITH THIS VALUE.
            86
87
            88
                                                                                                                                  >LD-08-0 6 L
            89
            90
            91
                    000124
                                        010167
                                                             ABBBBBBB
                                                                                                                                                                                       :SAVE-POINTER:
:LOCATE-START-ADDR IN-COMMAND-LINE
                                                                                                      2$:
                                                                                                                          MOV:
                                                                                                                                              R1.RTHPT
            92
                    000130
                                        004767
                                                             000000G-
                                                                                                                           ISP
                                                                                                                                              PC.FIND
            93
                    000134
                                         103004
                                                                                                                          BCC
                                                                                                                                              3$
                                                                                                                                                                                        OK, CONTINUE
            94
                    000136
                                                             000000G
001176
                                        004767
                                                                                                                           JSR
                                                                                                                                              PC,ERR3
                                                                                                                                                                                       ; "MISSING · OPERAND:
                    000142
                                        000167
                                                                                                                           JMP
                                                                                                                                              LD1X
                                        004767
            96
                    000146
                                                             000000G
                                                                                                                           JSR
                                                                                                      3$:
                                                                                                                                              PC.PACK
                                                                                                                                                                                        :CONVERT COMMAND.LINE.VALUE.TO.BINARY.
            97
                    000152
                                         103004
                                                                                                                          BCC
                                                                                                                                              4$
                                                                                                                                                                                       :CONVERSION SUCCESSFUL
            98
                                                                                                                                               PC∗ERR4
                    000154
                                        004767
                                                             000000G
                                                                                                                           JSR
                                                                                                                                                                                        : 'INVALID: NUMERIC: VALUE:
                    000160
                                        000167
                                                             001160
                                                                                                                           IMP
                                                                                                                                              LD1X
           100
                                                             000000G-000000G-4$:
          101
                   000164
                                        016767
                                                                                                                          MOV.
                                                                                                                                              BINWD, MSTRT.
BINWD, MSTR2.
                                                                                                                                                                                       :SAVE LOADING START ADDRESS:
:SAVE IT TWICE (FOR REFRESH ON LOOP)
:INIT END ADDRESS:
                   000172
          102
                                        016767
                                                             000000G · 000000G
                                                                                                                          MOV.
          103
                   000200
                                        012767
                                                             177777
                                                                                 000000G
                                                                                                                          MOV
                                                                                                                                               #-1,MEND
          104
                                                                                                                         START ADDRESS HAS BEEN FOUND: SCAN FOR END ADDRESS OR LOOP INDICATOR (CONDITIONS 2, 3 ABOVE). IF THERE IS NOTHING FURTHER IN THE COMMAND LINE, CONDITION: i IS IN EFFECT.
          105
          186
          107
          108
          109
          110
                   000206
                                       004767
                                                            000000G
                                                                                                                          JSE
                                                                                                                                              PC.FIND
                                                                                                                                                                                       :SCAN . COMMAND . LINE
                   000212
                                        103004
                                                                                                                                                                                       SOMETHING THE STATE OF THE STAT
                                                                                                                          BCC
                                                                                                                                              5$
         112
                  000214
                                       952767
                                                             000000G - 000000G
                                                                                                                                              #RP,BASE
                                                                                                                          BIS
         113
                   000222
                                       000437
                                                                                                                          BR
                                                                                                                                              9$
                                                                                                                                                                                       :JUMP TO RTN
```

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```
115 000224
                  122711
                           000114
                                                      CMPB
                                                               #1L,(R1)
                                                                                 :LOOP · INDICATOR
                  001006
                                                                                 ;LOUP: INDICATOR:
;NO; MUST BE UPPER ADDRESS:
;LOWER: ADDRESS: BECOMES: UPPER ADDRESS
    116 000230
117 000232
                                                      BNE .
                                                               6$
                                                               MSTRT, MEND
                           000000G 000000G
                  016767
                                                      MOV
        000240
                  004767
                           000000G
                                                      JSR.
                                                               PC.HANG-
                                                                                  :HOW.TO.STOP.LOOP.
    119 000244
                  000426
                                                                                  :JUMP TO RTH
    120
    121 000246
                  994767
                                                               PC*PACK+
                           000000G
                                                      JSR
                                                                                 CONVERT UPPER ADDRESS.
    122-000252-
                  103004
                                                      BCC.
                                                               7$
                                                                                 OK, CONTINUE
    123 000254
                  004767
                           000000G
                                                               PC, ERR4
                                                                                 : 'INVALID NUMERIC VALUE
                                                      ISR
    124 000260
                  000167
                                                      JMP
                                                               LD4X
                                                                                 :AND EXIT
    125
    126
                                                      SAVE · END · ADDRESS · (BINARY)
    127
                                                      CHECK FOR LOOP INDICAGE AFTER END ADDR (CONDITION 4).
    128
    129
        000264
                  016767
                           000000G-000000G-7$:
                                                                                 :SET-UP-ENDING-ADDRESS-
:CHECK-FOR-LOOP-INDICATOR
                                                               BINWD, MEND.
    130
        000272
                  004767
                           000000G
                                                      JSR -
                                                               PC.FIND
    131
        000276
                  103411
                                                      BCS.
                                                                                 :NO LOOP
:CORRECT INDICATOR
                                                               9$
    132 - 999399
                  122711
                           000114
                                                      CMPB
                                                               #*Lx(R1)
        000304
                  001404
                                                                                 :YES, CONTINUE
:NO, PUT OUT MESSAGE
                                                      BEQ
                                                               8$
    134
        000306
                  004767
                                                               PC.ERR1
                           000000G.
                                                      JSR
    135 000312
                  000167
                           001026
                                                      JMP
                                                                                 :AND.EXIT.
:HOW.TO.STOP.LOOP
                                                               LDIX
    136 000316
                  004767
                           000000G
                                             8$:
                                                               PC. HANG
                           000000G
    138 000322- 016701
                                                                                 :POINT.TO.ROUTINE.
                                             9$:
                                                      MOV.
                                                               RTHPT,R1
    139 000326 000171
                           000000
                                                      JMP
                                                               @(R1)
    140
    141
    142
                                                      LOAD FSA A
    143
    144 000332
                                             LDAM::
    145
        000332
                  012767
                           000000 -000000G
                                                      MOV.
                                                               #T$FSAA,APLACE
                                                                                 ;SELECT:FSA:A:FOR:SUBRTN:
                 016746
016746
    146
        000346
                           000000G
                                                      MOV:
                                                               AHIGH,-(SP)
ALOW,-(SP)
                                                                                 ;UPPER · MEMORY · LIMIT ·
    147
        000344
                           000000G
                                                      MOV.
                                                                                 :LOWER.LIMIT.
    148 000350
                 004767
                                                               PC.BUFFSA
                           000000G
                                                      JSR
                                                                                 :CHECK-ADDRESS-LIMITS, ETC
    149
        000354
                  103402
                                                      BCS -
                                                               1$
                                                                                 ;FAILED · CHECK ·
    150
        000356
                 004767
                           000000G
                                                               PC, LDCNTL
                                                      JSR -
                                                                                 :LOAD FSA
    151 000362-
                 000167
                           000756
                                             1$:
                                                      JMP
                                                               LDIX
                                                                                 :AND EXIT
                                                      LOAD FSA B
    154
    155 000366
                                             LDBM::
    156
        000366
                 012767
                           000004 000000G
                                                               #T$FSAB,APLACE
BHIGH,-(SP)
BLOW,-(SP)
                                                      MOV
                                                                                 ;SELECT.FSA.B.FOR.SUBRTN.
        000374
    157
                 016746
                          000000G
                                                                                 :UPPER:MEMORY:LIMIT:
:LOWER:LIMIT:
                 016746
        000400
                           000000G
                                                      MOV.
    159 000404
                  004767
                          999999G
                                                      JSR.
                                                               PC, BUFFSA.
                                                                                 ;CHECK ADDRESS LIMITS, ETC.
                 103402
    160
        000410
000412
                                                      BCS.
                                                               1 $
                                                                                 :FAILED CHECK
                 004767
    161
                          000000G
                                                      JSR
                                                               PC.LDCNTL.
                                                                                 :LOAD.FSA.
    162 000416
                 000167
                          000722
                                             1$:
                                                      JMP -
                                                               LD4X
    163
    164
                                                      LOAD FSA C
    165
    166
        000422
                                            LDCM::
    167
        000422
                 012767
                          000014 000000G
                                                               #T$FSAC,APLACE
CHIGH,-(SP)
CLOW,-(SP)
                                                                                :SELECT.FSA.C.FOR.SUBRTH
                                                      MOV.
    168
        000430
                 016746
016746
                          000000G
                                                      MOV.
                                                                                 #MOVE-UPPER-MEMORY LIMIT-
#LOWER-LIMIT-
#CHECK-ADDRESS-LIMITS, ETC
        000434
                          00000006
                                                      MOV.
    170 000440
                 004767
                          000000G
                                                      JSR
                                                               PC, BUFFSA
    171 000444
                 103402
                                                      BCS
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172 - 000446
            004767
                       000000G
                                                   JSR.
                                                            PC.LDCHTL.
                                                                               ;LOAD FSA
173
174
    000452 000167
                       000666
                                          1$:
                                                   TMP
                                                            LD4X
                                                                               :AND EXIT
175
176
177
                                                   LOAD · INPUT · BUFFER ·
178
    000456
                                          LDIB::
                                                            #T$DISK,APLACE
IHIGH,-(SP)
ILOW,-(SP)
                                                                               SIMULATE DISK
SUPPLY UPPER MEMORY LIMIT
LOWER LIMIT
PREPARE TO LOAD
              012767
016746
180
    000456
                       000200 .000000G
                                                   MOV
                                                                                                                      000464
                       000000G
181
                                                   MOV
    000470
              016746
                       000000G
182
                                                   MOV-
183 000474
              004767
                                                   JSR
                                                             PC.BUFS2
                                                                               HO ERBORS - CONTINUE
184
    000500
              103002
                                                   BCC
                                                             100$
185
    000502 000167
                       999636
                                                   JMP
                                                            LDIX
197
    000506
              032767
                       000000G-000000G-100$:
                                                             #RP,BASE.
                                                                               :REPEAT.PROMPT.?.
188
    000514
000516
              001420
                                                   BEQ
                                                                               :NO, ONCE ONLY
              004767
                                                            PC.PDATA
                                                                               #READ DATA FROM COMMAND LINE
#NOT END OF MEMORY
#IF END OR ERROR EXIT
189
                       000000G
                                          15:
                                                   JSR
    000522
                                                   BCC
              103002
                                                             10$
191
    000524
              000167
                       000614
                                                    JMP
                                                             LD1X
192 - 000530
                                                                               102002
000167
                                          10$:
                                                   BVC
                                                             20$
193
    000532
                       000606
                                                   JMP .
                                                             LD4X
194
    000536
              016702
                       000000G
                                                   MOV
                                                             MSTR2,R2
195
    000542
              016712
                       000000G
                                                   MOV.
                                                             DATA1.(R2)
                                                                               :LOAD
196
    000546
              866767
                       000000G - 000000G
                                                   ADD
                                                             INCVAL, MSTR2.
                                                                               :ADVANCE ADDRESS
              000760
                                                             1.5
                                                                               :REPEAT.
198
                                                   PROMPT ONCE THEN FILL MEMORY
199
200
201
    000556
              004767
                       000000G
                                          2$:
                                                   JSR
                                                             PC, PDATA
                                                                                ; PROMPT · ONCE ·
202
    000562
              103002
                                                   BCC
                                                                               ; NOT END OF MEMORY OR ERROR
; IF YES, EXIT
                                                             30$
293
    000564
              000167
                       000554
                                                    JMP.
                                                             LD1X
                                                                               CR> RESPONSE TO PROMPT:
YES, MISSING OPERAND
204 000570
              102004
                                          30$:
                                                   BVC
JSR
                                                             40$
                                                             PC,ERR3
205
    000572
              004767
                       000000G
     000576
              000167
                       000542
                                                    JMP
                                                             LDIX
297
    000602
              016702
                       000000G
                                                   MOV.
                                                             MSTR2,R2
                                                                                :LOAD IB ADDRESS
              016712
208
    000606
                       000000G
                                                   MOV:
                                                             DATA1.(R2)
                                                                               :ADVANCE ADDRÉSS.
                       000000G · 000000G
000000G · 000000G
209
    000612
              066767
                                                   ADD:
                                                             INCVAL, MSTR2
210
    000620
              026767
                                                   CMP
                                                                               HAS UPPER MEMORY LIMIT BEEN REACHED
                                                             {\tt MSTR2.MEND}\,\cdot
     000626
              101765
                                                   BLOS
                                                             40$
212.000630
              032767
                       000000G · 000000G
                                                             #LOOP,BASE
                                                                                : REPEAT COMMAND
213 00063E
214 000640
              001002
000167
                                                                                :YES, CONTINUE
:ELSE-EXIT-
                                                   BNF
                                                             50$
                       000500
                                                    JMP
                                                             LDIX
215 000644
              016767
                       000000G-000000G-50$:
                                                   MOV
                                                             MSTRT, MSTR2
                                                                                :REINITIALIZE - ADDRESS -
216
217
    000652 000753
                                                             40$
218
219
                                                   LOAD OUTPUT BUFFER
220
221
    000654
                                          LDOB::
                                                                               000654
              012767
                       000040
                                000000G ·
                                                             #T$ICD.APLACE
                                                             OHIGH,-(SP)
OLOW,-(SP)
PC,BUFS2
223 000662
224 000666
              016746
016746
    000662
                       000000G
                                                   MOV.
                       DODDDDDG
                                                   MOV:
225
    000672
              004767
                       000000G
                                                    JSR
226
227
    999676
              103002
                                                   BCC
                                                             100$
    000700
                       000440
              000167
                                                   JMP
                                                             LD4X
                                                                                ;ERROR, EXIT
228
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TMEM- · · · ₱
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                                         Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
     229 000704
                    332767
                              000000G · 000000G · 100$:
                                                            BIT.
                                                                       #RP,BASE
                                                                                           ;REPEAT.PROMPT.?.
                                                                                          READ DATA FROM COMMAND LINE
NOT END OF MEMORY
    230 000712
                    001430
                                                             BEQ
                                                                       2$
     231
         000714
                    004767
                              000000G
                                                             JSR
                                                                       PC.PDATA
         000720
                    103002
                                                             BCC
                                                                       10$
                                                                                          FIFEND OF ERROR EXIT
     233
         000722
                    000167
                              000416
                                                             TME
                                                                      LDIX
     234
         000726
                    102002
                                                  10$:
                                                            BVC
                                                                                           :<CR> RESPONSE TO PROMPT
:YES, EXIT
                                                                       20$
                    000167
012767
     235
         000730
                              000410
                                                             JMP
         000734
     236
                                        176362
                              000032
                                                  20$:
                                                            MOV
                                                                       #T$OBWA,TD$TAW
          000742
                    016767
                              000000G-176364
                                                            MOV
                                                                      MSTR2,TD$TDW
     238
         000750
                    012767
                                        176362
                              000036
                                                            MOV
                                                                      #T$OB.TD$TAW.DATA1.TD$TDW.
         000756
000764
000772
     239
                    016767
                              000000G · 176364
000000G · 000000G
                                                             MOV
                    066767
     240
                                                             ADD
                                                                       INCVAL, MSTR2
                                                                                           ;ADVANCE ADDRESS
     241
                    000750
                                                                                           :REPEAT
     242
     243
                                                            PROMPT ONCE THEM FILL MEMORY
     244
          000774
     245
                    004767
                              000000G
                                                             JSR
                                                                      PC, PDATA.
                                                                                           :PROMPT ONCE
     246
          001000
                    103002
                                                                                           *NOT-END OF-MEMORY OR-ERROR:
*IF-YES, EXIT-
                                                            BCC
     247
          001002
                    000167
                              000336
                                                             .TMP
                                                                      LD4\times
     248
         001006
                    102004
                                                            BVC
                                                                                          :<CR> RESPONSE TO PROMPT ?
;YES, MISSING OPERAND
                                                                      40$
          001010
     249
                    004767
                              DODDODGG
                                                             JSR
                                                                      PC.ERR3
     250
          001014
                    000167
                              000324
                                                             .TMP
     251
          001020
                    012767
                              000032
                                        176362 40$:
                                                            MGV
                                                                      #T$OBWA,TD$TAW
MSTR2,TD$TDW
     252 - 001026
                    016767
012767
                              000000G · 176364
                                                            MOV
         001034
                              ийийизе.
                                        176362
                                                            MOV
                                                                       #T$OB, TD$TAW
     254
          001042
                    016767
                              000000G-176364
                                                            MOV
                                                                      DATA1.TD$TDW
     255
         001050
                    066767
                              000000G · 000000G
                                                                      INCVAL, MSTR2
MSTR2, MEND
                                                            ADD
                                                                                           :ADVANCE ADDRESS
     256
         001056
                    926767
101755
                              000000G · 000000G
                                                            CMP
                                                                                           :HAS-UPPER-MEMORY-LIMIT-BEEN REACHED:/
          001064
                                                            BLOS
                                                                                           :NO, CONTINUE.
     258
                    032767
         001066
                              000000G · 000000G
                                                            BIT
                                                                      #LOOP,BASE
                                                                                           : REPEAT COMMAND
     259
         001074
                    001002
                                                                                          :YES, CONTINUE.
                                                            BNE
                                                                      50$
     260 001076
                    000167
                              000242
                                                             JMP
                                                                      LD4X
                    016767
000743
     261 001102
                              000000G-000000G-50$:
                                                            MOV.
                                                                      MSTRT, MSTR2
                                                                                           :REINITIALIZE ADDRESS
     262.001110
                                                                       495
     263
     265
                                                            LOAD BYTE TRANSLATOR
     266
          001112
     267
                                                  LDBT::
                                                                                          :SET INTERFACE AND CONTROL
:SUPPLY MEMORY UPPER LIMIT,
:LOWER LIMIT
:PREPARE FOR LOOP
     268
         001112
                    012767
                              000040
                                      000000G
                                                                      #T$ICD.APLACE
THIGH.-(SP)
TLOW.-(SP)
                                                                                                                            FOR SUBRTH
                                                            MOV
         001120
001124
                    016746
016746
     269
                              000000G
                                                            MOV.
     270
                              000000G
                                                            MOV-
     271
         001130
                    004767
                              BBBBBBB
                                                            JSR
                                                                      PC, BUFSET
         001134
                    103503
                                                            BCS
                                                                      LDIX
     273
     274
         001136
                    032767
                                                                                           000000G 000000G
                                                            BIT
                                                                       #RP,BASE
     275
          001144
                    001430
                                                                      2$
PC,PDATA
                                                            BEQ
JSR
     276
277
         001146
                    004767
                              000000G
                                                                                          ; READ DATA FROM COMMAND LINE

; READ DATA PRESENT

; IF END OF MEMORY OR ERROR, EXIT

; CR> RESPONSE TO PROMPT

; YES, EXIT
         001152
                    103002
                                                                      10$
          001154
                    000167
                              000164
                                                            JMP
BVC
                                                                      LDix
     279
         001160
                    102002
                                                                      20$
     280
                              000156
000030
         001162
                    000167
                                                            JMP
                                                                      LD1X
    281
         001166
                    012767
                                        176362
                                                                      #T$BTAR,TD$TAW
MSTR2,TD$TDW
#T$BT,TD$TAW
                                                 28s:
                                                            MOV
                                                                                           ; SELECT · BYTE · TRANS REG ·
    282 9 9 1 1 7 4
                    016767
                              000000G·176364
                                                            MOV
                                                                                          #MOVE ADDR TO TRANSFER REG

#SELECT BYTE TRANS MEMORY

#LOAD BYTE TRANS
    283 001202
                   012767
                              888828
                                        176362
                                                            MOV
    284 001210
                   016767
                              000000G-176364
                                                            MOV.
                                                                      DATA1.TD$TDW
    285 001216
                   066767
                              000000G · 000000G
                                                            ADD
                                                                      INCVAL, MSTR2
                                                                                           :ADVANCE ADDRE
                                         Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
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286 001224	000750			BR	1\$;REPEAT	
287 288			;	PROMPT.	ONCE · THEN · F ILL · M	EMORY.	
289 290 001226 291 001232 292 001234 293 001240	004767 103002 000167 102004	000000G 000104	2\$: 30\$:	JSR: BCC: JMP: BVC: JSR:	PC,PDATA 30\$ LD1X 40\$ PC,ERR3	;PROMPTONCE: ;NOTEND OF MEMORY OR ERROR: ;IF YES, EXIT: ; <cr> RESPONSE TO PROMPT?; ;YES, MISSING OPERAND:</cr>	
294 001242 295 001246 296 001252 297 001260 298 001266	016767 012767	000000G 000072 000030 176372 000000G 176364 000000G 176362	40\$:	JMP· MOV· MOV· MOV· MOV·	LD1X #T\$BTAR,TD\$TAR MSTR2,TD\$TDW #T\$BT,TD\$TAW DATA1,TD\$TDW	;SELECT-BYTE-TRANS REG- ;MOVE-ADDR-TO-TRANSFER-REG- ;SELECT-BYTE-TRANS MEMORY- ;LOAD BYTE-TRANS-	
299 001274 300 001302 301 001310 302-001316 303 001320 304 001326 305 001330 306 001334	016767 066767 026767 101755 032767 001002 000167	9990905 - 176354 9999905 - 9999905 9999995 - 9999995 999919 - 9999995 999996 - 9999995		ADD: CMP: BLOS: BIT: BNE: JMP: MOV:	INCVAL,MSTR2. MSTR2,MEND. 40\$ #LOOP,BASE. 50\$ LD!X MSTRT,MSTR2.	;ADVANCE ADDRESS: ;HAS:UPPER:MEMORY:LIMIT:BEEN F ;NO; CONTINUE: ;REPEAT:COMMAND: ;YES; CONTINUE: ;ELSE:EXIT: ;REINITIALIZE:ADDRESS:	REACHED.
307 001342 308 309 310 001344 311 001344 312 001352 313 001356	042767 · 004767	000000G - 000000G 000000G -	; ; LD1X:	BR BIC: JSR: JMP:	#RP,BASE PC,KILL COMXX	:CLEAR.PROMPT.FLAG :KILL.AST.(IF.THERE.WAS.ONE)	x^{i}

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TMEM- ... M
                                            Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
     315
316
     317
318
                                                                  PRINT
     319
                                                                 PERFROM-SECOND-LEVEL-PARSING
EG. IN-THE-COMMAND:
>PR-08-0
     320
     321
                                                                 PARSE THE 'OB!
     324
325
          001362
                                                      PR1::
     326
          001362
                     004767
                                000000G
                                                                  JSR
                                                                                                  ;LOCATE MEMORY MNEMONIC IN COMMAND LINE
     327 001366
                     103004
                                                                 BCC
                                                                            1$
                                                                                                  OK, CONTINUE
                     004767
     328.001370
                                000000G
                                                                 JSR
                                                                            PC, ERR3
     329 001374
                                                                                                  : MISSING OPERAND:
                     000167
                                000726
                                                                 JMP
                                                                            PR1X
     330
                                                                                                  :EXIT-
                                                                                                                                                   331
                                                                 SCAN-THE-TABLE-OF-VALID-MEMORY-MNEMONICS-AND-ASSOCIATED
    332
333
                                                                 ROUTINE ADDRESSES.
     334 001400
                     012700
                                000006.
                                                      1$:
                                                                 MOV
                                                                             #PRILN,R0
                                                                                                  #NUMBER OF TABLE ENTRIES

#POINT TO TABLE

MATCH AGAINST COMMAND LINE
     335
         001404
                     012702
                                0000301
                                                                 MOV-
                                                                            #PRITBL, R2
          001410
                     004767
                                000000G
                                                                 JSR.
                                                                            PC,SCAN.
    337 001414
                     103004
                                                                 BCC.
                                                                            2$
                                                                                                  : MATCH - WAS - MADE -
    338 001416
                     004767
                                000000G
                                                                            PC, ERR6
                                                                 JSR-
     339 001422 000167
                                                                                                  : "INVALID MEMORY MNEMONIC"
                                                                 JMP .
                                                                            PRIX
     340
    341
                                                                 SAVE POINTER TO ROUTINE ASSOCIATED WITH THE MEMORY NEMONIC: SCAN THE REMAINDER OF THE COMMAND LINE FOR CONTROL DEPORTATION:

1. START ADDRESS ONLY, PRINT ONLY ONE PROPRY LOCATION:

> PROB 0
    342
    343
     344
    345
    346
                                                                     START ADDRESS, LOOP INDICATOR, LOOP ON THE READING OF THIS ONE MEMORY LOCATION ONLY. PRINT THE CONTENTS ONLY.
    347
    348
    349
                                                                     >PR-OB-0 L
    358
                                                                 3. START ADDRESS, END ADDRESS, NO LOOP, PRINT THE CONTENTS MEMORY BETWEEN THE START ADDRESS AND THE END ADDRESS.
    351
    352
                                                                     >PR 0B 0 6
    353
                                                                    START ADDRESS, END ADDRESS, LOOP INDICATOR, READ THE CONTENTS OF MEMORY BETWEEN THE START AND END ADDRESSES, HOWEVER, START ADDRESS AND START ADDRESS.
    355
    356
    357
    359 001426
                    010167
                                Й00000G
                                                      2$:
                                                                MOV-
                                                                           R1.RTNPT.
                                                                                                  ; SAVE POINTER
    360 001432
                    004767
                                000000G
                                                                 JSR
                                                                           PC.FIND
                                                                                                 ;LOCATE START ADDR IN COMMAND LINE:
:OK, CONTINUE:
;MISSING OPERAND:
    361
         001436
                    103004
                                                                 BCC.
                                                                            3$
    362.001440
                    004767
                                000000G
                                                                 JSR
                                                                           PC.ERR3
PRIX
    363
         001444
                    000167
                                000656
                                                                 JMP
    364 001450
                    004767
                               000000G
                                                                                                 CONVERT COMMAND LINE VALUE TO BINARY CONVERSION SUCCESSFUL (1) INVALID NUMERIC VALUE:
                                                                 JSR
                                                                           PC, PACK
    365 001454
                    103004
                                                                BCC
                                                                            4$
    366
         001456
                    004767
                               000000G -
                                                                JSR
                                                                           PC, ERR4
    367
         001462
                    000167
                               000640
                                                                           PR4X
    368
    369
         001466
                    016767
                               000000G-000000G-4$:
                                                                MOV.
                                                                                                 :SAVE-LOADING-START-ADDRESS
:SAVE-IT TWICE
:INIT-END-ADDRESS
                                                                           BIHWD, MSTRT.
         001474
                    016767
                               000000G -000000G -
                                                                           BINWD, MSTR2
                                                                MOV.
                    012767
   371 001502-
                               177777
                                          00000AG
                                                                MO+2+
                                                                           #-1,MEND.
                                             Approved For Release 2005/07/12 : CIA-RDP85-09514P000200020001-3
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TMEM-----MACRO--rii 110 27-MAR-80 15:37 PAGE- 6-1 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
     372
373
                                                             START ADDRESS HAS BEEN FOUND: SCAN-FOR END ADDRESS OR LOOP INDICATOR (CONDITIONS 2. 3 ABOVE). IF THERE IS NOTHING FURTHER IN THE COMMAND LINE. CONDITION 1 IS
     374
     375
     376
                                                             IN EFFECT.
     378
         001510
                    004767
                              000000G
                                                                                           :SCAN·COMMAND·LINE
:SOMETHING·THERE:
:SET·END ADDR·=·START·ADDR
:JUMP·TO RTN·
                                                             JSR.
                                                                       PC.FIND.
     379
         001514
001516
                    103004
                                                             BCC
                                                                       54
                    016767
                              000000G · 000000G
                                                             MOV
                                                                       MSTRT, MEND.
     381
         001524
                    000445
     382
     383
         001526
                    122711
                              000114
                                                             CMPB
                                                                       #!L.(R1)
                                                                                            :LOOP · INDICATOR
         001532
                    001011
                                                             BNE
                                                                                           ;NO, MUST BE UPPER ADDRESS ;SET FLAG FOR OUTPUT CONTROL ;LOWER ADDRESS BECOMES UPPER ADDRESS ;HOW TO STOP LOOP ; JUMP TO RTN
                                                                       6$
     385 001534
                    052767
                              000000G · 000000G
                                                             BIS
                                                                       #OUT, BASE
         001542
001550
     386
                    016767
                              000000G · 000000G
                                                             MOV.
                                                                       MSTRT, MEND
     387
                    004767
                              000000G
                                                             JSR.
                                                                       PC.HANG.
     388
         001554
                    000431
                                                                       9$
     389
         001556
     398
                    004767
                              000000G
                                                   6$:
                                                             JSR
                                                                       PC*PACK
                                                                                            CONVERT UPPER ADDRESS
     39 i
         001562
                    103004
                                                             BCC.
                                                                                           OK' CONTINUE:
                                                                       7$
         001564
                    004767
                              000000G
                                                             JSR
                                                                       PC.ERR4
    393 001570
394
                    000167
                              177550
                                                             JMP
                                                                       LD4X
                                                                                            :AND FXIT
     395
                                                             SAVE-END-ADDRESS-(BINARY)
CHECK-FOR-LOOP-INDICATOR-AFTER-END-ADDRESS (CONDITION-4).
     396
     392
     398
         001574
                    016767
                              000000G 000000G 7$:
                                                             MOV
                                                                       BIHWD, MEND
                                                                                           :SET.UP.ENDING.ADDRESS
     399
         001602
                    004767
                              000000G
                                                             JSR.
                                                                       PC.FIND.
                                                                                            :CHECK - FOR - LOOP - INDICATOR
     400
         001606
                    103414
                                                                       9$
                                                                                           :NO-LOOP
    401
         001610
                    122711
                              000114
                                                                                           CORRECT LOOP INDICATOR
YES, CONTINUE
                                                             CMPB
                                                                       #*L,(R1)
    402
         .001614
                    001404
                                                             BEO.
                                                                       8$
     403
         001616
                              000000G
                                                                       PC,ERR1
                    ññ4767
                                                             JSR
    404 001622
                    000167
                              000500
                                                             JMP
                                                                       PR1X
                                                                                           :EXIT
    405
         001626
                    052767
                              000000G · 000000G · 8$:
                                                             ВІЗ
                                                                       #OUT,BASE
                                                                                           SET OUTPUT CONTROL
    406 001634
                    004767
                                                             JSR
                                                                       PC.HANG
                                                                                            :HOW TO STOP LOOP
    407
    408
         001640
                    016701
                              000000G
                                                             MOV.
                                                                       RTHPT, R1
                                                                                           :POINT.TO.ROUTINE
;JUMP.TO ROUTINE.
    409 001644
                    000171
                              000000
                                                             JMP -
                                                                       @(R1)
    419
    411
    412
                                                             PRINT FROM FSA A
    413
    414 001650
                                                  PRAM: :
    415
         001650
001656
                    012767
                              000000 · 000000G
                                                            MOV
                                                                       #T$FSAA,APLACE
AHIGH,-(SP)
ALOW,-(SP)
                                                                                           :SELECT FSA · A · FOR · SUBRTN
    416
                   016746
                              000000G
                                                             MOV
                                                                                           :UPPER · MEMORY · LIMIT ·
    417
                    016746
         001662
                              000000G
                                                             MOV
                                                                                           ;LOWER · LIMIT ·
    418 001666
                    004767
                              000000G
                                                             JSR
                                                                       PC.BUFFSA
                                                                                           CHECK · ADDRESS · AGAINST · MEMORY
                    103402
    419 001672
                                                            BCS.
                                                                       1$
    420 001674
                                                                       PC, PRONTL
                   004767
                              000000G
                                                             JSR
                                                                                           : PRINT MEMORY
    421 001700
                   000167
                              000422
                                                                       PR1X
                                                                                           :AND · EXIT
    422
423
                                                            PRINT-FROM-FSA-B
                                                                                          SELECT FSA B FOR SUBRINGS
                                                                                                                                  424
    425
         001704
                                                  PRBM::
                                                                                                                                   40
    426
                                                                                                                                      001704
                              000004 000000G
                   012767
                                                                       #T$FSAB;APLACE
                                                            MOV
    427 001712
428 001716
                   016746
                              000000G
                                                            MOV
                                                                       BHIGH,-(SP)
                   016746
                              000000G
                                                                                  CIA-RDP85-00514R000200020001-3
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429 001722
430 001726
                                                                                          #CHECK ADDRESS AGAINST"MEMORY LIMITS #CHECK FATHED # PRINT MEMORY
                    004767
                              000000G
                                                             JSR
                                                                      PC, BUFFSA
                    103402
                                                            BCS.
                                                                       1$
     431 001730
                    004767
                              000000G
                                                                      PC. PRCHTL
                                                             TSR
     432.001734
                   000167
                              000366
                                                  1$:
                                                             JMP.
                                                                      PR1X
                                                                                           :AND EXIT
    433
     434
                                                            PRINT-FROM-FSA-C-
    435
    436 001740
                                                  PRCM::
    437 001740
                                                                                          SELECT ESA OFFOR SUBERN
MOVE DEPER MEMORY LIMIT
FLOWER COMITS
SCHECK ADDRESS AGAINST MEMORY LIMITS
                    012767
                              000014 000000G
                                                            MOV
                                                                      #T$FSAC,APLACE
    438
         001746
                   016746
016746
                              000000G
                                                            MOV:
                                                                      CHIGH,-(SP)
CLOW,-(SP)
         001752
                              DODDDDDG
                                                            MOV.
     440 001756
                    004767
                              000000G
                                                             JSR.
                                                                      PC, BUFFSA
    441 001762
                    103402
                                                            BCS
                                                                      1$
                                                                                          :CHECK-FAILED.
     442.001764
                                                                      PC.PRCHTL
                    004767
                              000000G
                                                             JSR
                                                                                          :PRINT MEMORY
     443 001770
                    000167
                              000332
                                                  1$:
                                                                                          :AND.EXIT
    444
     445
     446
                                                            PRINT FROM INPUT BUFFER
     447
    448 001774
449 001774
                                                  PRIB::
                   012767
016746
                              000200 000000G
                                                                      #T$DISK,APLACE
IHIGH,-(SP)
ILOW,-(SP)
                                                                                          :SELECT. DISK. SIMULATION
:SUPPLY UPPER MEMORY LIMIT
:LOWER LIMIT
:PREPARE TO LOAD
                                                            MOV
     450
         002002
                              000000G ··
    451 002006
                    016746
                              000000G-
                                                            MOV:
    452.862612.
                   004767
                                                            JSR
                                                                      PC,BUFS2
     453 002016
                    183543
                                                            BCS
                                                                      PR1X
                                                                                          : ERROR · ENCOUNTERED
    454
    455 002020
456 002024
                    016702
                              000000G
                                                                                          :LOAD IB ADDRESS
:READ IB
                                                  1$:
                                                            MOV-
                                                                      MSTR2,R2
(R2).DATA1
                    011267
                              000000G
                                                            MOV.
    457
         002030
                   004767
                              00000UG
                                                            JSR -
                                                                      PC, PRDATA
                                                                                          CALL PRINT SUBROUTINE.
    458
    459 002034
                    066767
                                                                                          :ADVANCE ADDRESS: :
:HAS-UPPER-MEMORY/LIMIT-BEEN REACHED
:NO. CONTINUE....
                              000000G-000000G-
                                                                      INCVAL, MSTR2
     460 002042
                   026767
                             000000G 000000G
                                                            CMP -
                                                                      MSTR2, MEND
    461 002050
                    101763
                                                            BLOS
                                                                      1$
    462.002052
                   032767
                              000000G · 000000G
                                                            BIT-
                                                                      #LOOP, BASE
                                                                                          ;LOOP ON ? ;
;NO, EXIT
;REINIT ADDRESS
     463
         002060
                   001522
                                                                      PR1X
    464 002062
                   016767
                             000000G · 000000G
                                                            MOM
                                                                      MSTRT, MSTR2
                   000753
    465 002070
                                                                      1$
                                                                                          ;START OVER
    466
    467
    468
                                                            PRINT-FROM-OUTPUT-BUFFER
    469
    470 002072
                                                  PROB::
         002072
                   012767
                             000040 000000G
                                                                                          :SELECT: INTERFACE: AND: CONTROL: FOR: SUBRTN: SUPPLY: UPPER: MEMORY: LIMIT :LOWER: LIMIT
                                                                      #T$ICD, APLACE.
    472-002100
                   016746
                             000000G
                                                                      OHIGH,-(SP)
OLOW,-(SP)
PC,BUFS2
                                                            MOV.
    473 002104
474 002110
475 002114
                   016746
                              000000G
                                                            MOV.
                   004767
                              000000G
                                                            JSR
                                                                                          ;PREPARE FOR LOAD .
                   103504
                                                            BCS
    476
    477 002116
478 002124
                   012767
                              000034
                                        176362 15:
                                                            MOV-
                                                                      #T$OBRA,TD$TAW
                                                                                          #SELECT-OUTPUT-BUFFER-WRITE-REG
#MOVE-ADDR-TO-TRANSFER-REG
#PREPARE FOR-LCAD
                             000000G 176364
000036 176372
176374 000000
                   016767
012767
                                                            MOV.
                                                                      MSTR2,TD$TDW
#T$OB,TD$TAR
    479 002132
480 002140
                                                            MOV.
                                                            MÕÝ.
                   016767
                                       000000G
                                                                      TD$TDR,DATA1
                                                                                           :LOAD.
    481 002146
                   004767
                             000000G
                                                                      PC.PRDATA
                                                                                          CALL PRINT SUBROUTINE
    482
    483 002152
                   066767
026767
                             000000G · 000000G ·
                                                            ADD.
                                                                      INCVAL, MSTR2
                                                                                          : ADVANCE - ADDRESS -
    484 002160
                             000000G · 000000G
                                                                     MSTR2, MEND
                                                            CMP -
                                                                                          ;HAS.UPPER.MEMORY.LIMIT.BEEN REACHED
;NO. CONTINUE:
    485 002166
                   101753
                                                           BLOS.
                                                                      13
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                                      Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
    486 002170
                  032767
                            000000G · 000000G
                                                        BIT.
                                                                  #LOOP,BASE
                                                                                     :LOOP ON ?
    487 002176
                  001453
                                                        BEQ.
                                                                  PR1X
                                                                                    :NO, EXIT
    488 002200
                  016767
                            000000G · 000000G
                                                                  MSTRT, MSTR2
                                                                                    ;REINIT ADDRESS
    489 002206
                  000743
                                                        BR
                                                                                     :START-OVER
    490
    491
    492
                                                        PRINT FROM BYTE TRANSLATOR
    493
    494 002210
                                               PRBT::
    495 002210
                  012767
                            000040
                                     000000G
                                                                  #T$ICD.APLACE
THIGH.-(SP)
TLOW.-(SP)
                                                        MOV
                                                                                    :SELECT INTERFACE AND CHTL FOR SUBRIN
    496 002216
                  016746
016746
                            000000G:
                                                                                    ;SUPPLY MEMORY UPPER LIMIT :LOWER LIMIT
    497
         002222
                            000000G
                                                        MOV-
    498 002226
                  004767
                            000000G
                                                                  PC.BUFSET
                                                        JSR.
                                                                                     :PREPARE FOR LOAD
    499
        002232
                  103435
                                                        BCS
                                                                  PR1X
                                                                                    : FRROR -
    500
    501
        002234
                  812767
                            000030
                                     176362
                                               1$:
                                                        MOV
                                                                  #T$BTAR,TD$TAW
                                                                                    ;SELECT.BYTE.TRANS REG.
    502.002242
                            000000G-176364
                  016767
                                                                 MSTR2.TD$TDW
#T$BT.TD$TAR
                                                        MOV.
                                                                                    :MOVE · ADDR · TO · TRANSFER · REG
    503 002250
504 002256
                  012767
                            000020 176372
                                                        MOV
                                                                                     :SELECT BYTE TRANS MEMORY
                  016767
                            176374
                                     000000G
                                                                  TD$TDR.DATA1
                                                        MOV
                                                                                    :LOAD BYTE TRANS:
:CALL PRINT SUBROUTINE
    505
        002264
                                                                  PC.PRDATA
                  004767
                            000000G
                                                        JSR
    506
         002276
    502
                   066767
                            000000G-000000G
                                                        ADD.
                                                                  INCVAL, MSTR2
                                                                                    :ADVANCE ADDRESS:
:HAS-UPPER-MEMORY-LIMIT-BEEN REACHED
:NO. CONTINUE:
:LOOP-ON ?
        002276
    508
                  026767
                                                                  MSTR2, MEND
                            000000G · 000000G
                                                        CMP
    509 002304
                   101753
                                                        BLOS
                                                                  1$
    510
        002306
                  032767
                            000000G - 000000G
                                                                  #LOOP, BASE
                                                        BIT
    511
        002314
                  001404
                                                        BEQ
                                                                  PR1X
                                                                                    :NO. EXIT:
:REINIT:ADDRESS
    512-002316
                  016767
                            000000G · 000000G
                                                        MOV.
                                                                  MSTRT, MSTR2
    513 002324
514
                  000743
                                                        BR
                                                                  15
                                                                                    :START-OVER
    515
    516 002326
                                               PRIX:
    517 002326
                  042767
                            000000C-000000G
                                                        BIC.
                                                                  #<OUT+ONCE>.BASE.;CLEAR.CONTROL.FLAGS
    518 002334
                  004767
                            000000G
                                                        JSR.
                                                                  POAKTILL:
                                                                                    :KILL-AST-(IF-THERE-WAS-ONE)
    519 002340
                  000167
                            000000G
                                                                  COMXX.
    520
    521
                  000001
                                                        .END
```

A MARKET

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J. J. J. J. J.

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TMEM MEM 0 M1110 27-MAR-80 15:37 PAGE 6-4
SYMBOL TA Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
FHIGH = * ****** GX -
                                   BYTE33= 000041
                                                                      BYTE85= 000125
                                                                                                                     000060RG
                                                                                                                                      002 · Q$CHB · = · 000400
ALOW = ****** GX
                                   BYTE34= 000042
                                                                      BYTE86= 000126
                                                                                                         LD1LN = 000006 G
                                                                                                                                      Q$CHRL=.000200
002.Q$CLR.=.000040
ALUCKE = . 040000
                                   BYTE35= 000043
BYTE36= 000044
                                                                      BYTE87= 000127
                                                                                                         LD1TBL
                                                                                                                    000000RG
ALU0E - - 004000
                                                                      BYTE88= 000130
                                                                                                         LD1X-
                                                                                                                     001344R
                                                                                                                                      002 · Q$CNC · = ·
                                                                                                                                                        030000
APLACE= ****** GX
                                   BYTE37 = . 000045
                                                                      BYTE09= 000131
BYTE9 = 000011
                                                                                                         LOC.EN= 000100
                                                                                                                                            Q$CP
                                                                                                                                                        000060
A01 = 010000
BASE = ******* GX
                                   BYTE38= 000046
                                                                                                                                            Q$CPCC= 000010
Q$CPC = 000260
Q$CSC = 010000
                                                                                                         LOC:WA= 040000
                                   BYTE39= 000047
BYTE4 = 000004
                                                                      BYTE90= 000132
                                                                                                         LOC:WB= 100000
LOOP - ********* GX:
BHIGH -- ***** GX
                                                                      BYTE91=-000133
BYTE92=-000134
BINUD - - ******* GX
                                   BYTE40 = . 000050
                                                                                                         MAREN 1 = - 0000001
BITVAL = 000000
BIT0 = 000001
BIT1 = 000002
                                                                                                                                            0 \pm 0 SFL = \cdot
                                                                                                                                                        000360
                                   BYTE41= 0000051
                                                                                                                                            U$L5EL - 000000
Q$CSET - 000002
Q$CSP - 020000
Q$DMA - 000001
                                                                      BYTE93= 000135
                                                                                                         MAREH2 = . 004000
                                   BYTE42= 000052
                                                                      BYTE94= 000136
                                                                                                         MARLOD= 010000
MAROUT= 000002
                                   BYTE43- 000053
                                                                      BYTE95- 000137
BYTE96- 000140
BIT10 = 002000
                                   BYTE44= 000054
                                                                                                         MAR.LO= 002000
MAR.OU= 000040
MBKALL= 001000
                                                                                                                                            Q$ENBK = . 040000
BIT11 = 004000
                                                                      BYTE97= 000141
                                   BYTE45 = . 000055
                                                                                                                                            Q$ENOP = . 020000
BIT12 - 010000
BIT13 - 020000
                                   BYTE46 = . 000056
                                                                      BYTE98= 000142
BYTE99= 000143
                                                                                                                                            Q$FAL = 004000
Q$FC = 000045
Q$FO = 000044
                                   BYTE47= 000057
                                                                                                         MBKCLK= 000400
BIT14 = 040000
                                   BYTE48 = 000060
BYTE49 = 000061
                                                                      BYTVAL = 000144
                                                                                                         MEND: =: ****** GX: MMADRD=: 000100
BIT15 = 100000
BIT2 = 000004
BIT3 = 000010
                                                                      CBKALL = . 001000
                                                                                                                                            Q$FP = 000046,
Q$HBF = 000002
                                   BYTE5 = 000005
                                                                      CBKCLK= 000400
CHIGH = ******** GX-
CLOW = ******** GX-
                                                                                                         MMLEFT=-0000002-
MMOE---000004
                                   BYTE50=-000062
BYTE51=-000063
BYTE52=-000064
                                                                                                                                            Q$ICP -- 000006
         = 000020
                                                                                                         MMWRTE = . 000010
                                                                                                                                            Q$IHB -- 000003
                                                                                                        = · 000040
= · 000100
BITS
                                                                      CHOBRE = 100000
COMXX = ******* GX
                                                                                                                                            Q$IHRL= 000002
                                   BYTE53= 000065
BIT6
                                                                                                                                            Q$IMRP= 000007
         = 000200
BIT7
                                   BYTE54= 000066
BYTE55= 000067
                                                                      CPCCEN= 010000
                                                                                                                                            Q$LBD---001000
Q$LBDP--001001
         = 000400
                                                                      CPREAD = 040000
         = 001000
                                   BYTE56= 0000070
                                                                      CPWRTE = - 020000
                                                                                                                                            Q$LBP - - 000001
BLOW: = : ****** 3X:
                                   BYTE57= 000071
                                                                                                         MSYN = 000040
N = 000144
                                                                      CSADRD=-000004
                                                                                                                                            Q$LDCD= 000003
BUFFSA= ****** GX-
BUFSET= ****** GX-
                                                                      CSEQCI = 100000
CSOE = 000040
                                   BYTE58= 000072
                                                                                                                                            Q$LDMD= 0000003
                                   BYTE59= 000073
BYTE6 = 000006
                                                                                                         OHIGH: = ******** GX:
OLOW: = ******* GX:
ONCE: = ******** GX:
                                                                                                                                            0$LDPP= 002000
BUFS2 = ******* GX
                                                                                                                                            Q$LHP = 010000
Q$MNC = 140000
Q$MR = 000052
Q$MRP = 000040
                                                                      CSWRTE = 000100
BYTE0 = 000000
BYTE1 = 000001
                                   BYTE60= 000074
                                                                      DATA1 = ****** GX
                                   BYTE61 = . 000075
                                                                      DBR.RD= 000001
DB$CPP= 001457
                                                                                                                 = · жжжжжж <u>G</u>X ·
                                                                                                         DHT.
BYTE10= 000012
                                   BYTE62= 000076
                                                                                                                 = · жжжжжжж GX ·
                                                                                                         PACK -
BYTE11= 000013
                                                                                                                                           U$MRP = 000040

O$MRP2= 000240

O$MSC = 040000

O$MSET= 000044

O$MSP = 1000004
                                   BYTE63= 000077
                                                                      DB$SPT= 000026
                                                                                                         BYTE12=-000014
                                   BYTE64= 000100
BYTE65= 000101
                                                                      DB$TPC= 000023
                                                                                                         PLB.
PLC.
BYTE13= 000015
                                                                      DISPGS=-100000
DMAAWR=-000005
DMARRD=-000003
                                                                                                                  = 0000020
BYTE14= 000016
BYTE15= 000017
                                   BYTE66=-000102
                                                                                                         PLD
                                                                                                                  - 000030
                                   BYTE67 = 000103
BYTE68 = 000104
                                                                                                                                            Q$PP = 000100
                                                                                                         PLRWR - = - 000200
BYTE16=-000020
                                                                      DMARWR = . 000004
                                                                                                         PLR.EN= 000200
                                   BYTE69= 000105
BYTE7 = 000007
BYTE17= 000021
BYTE18= 000022
                                                                      ENBR: =:010000
                                                                                                         PRAM-
                                                                                                                    001650RG
                                                                                                                                      002 Q$PPSW= 000320
002 Q$PP2 = 000300
                                                                              = · ****** GX
                                                                      ERR1
                                                                                                                    001704RG
                                                                                                         PRBM-
BYTE19= 000023
                                   BYTE70= 000106
BYTE71= 000107
                                                                      ERR3
                                                                               = ****** GX
                                                                                                         PRBT
                                                                                                                    002210RG
                                                                                                                                      002 Q$QHLT=:000013
BYTE2 - - 000002
                                                                      ERR4
                                                                              = · жжжжжж GX
                                                                                                                                      002 Q$QL = 000043
Q$QLA = 000053
Q$QLB = 000054
                                                                                                         PRCM-
                                                                                                                    001740RG
BYTE20= 000024
BYTE21= 000025
                                   BYTE72= 000110
                                                                              = · ********* GX
                                                                      FRRS
                                                                                                         PRCNTL = ****** GX
                                   BYTE73= 000111
                                                                      FIND
                                                                                                         PRDATA = ******* GX
BYTE22= 000026
                                   BYTE74= 000112
                                                                               = · ******* GX
                                                                                                                                     002 Q$QLR = 000001
002 Q$QW = 000042
                                                                      HANG
                                                                                                         PRIB.
                                                                                                                    001774RG
BYTE23=-000027
BYTE24=-000030
BYTE25=-000031
                                   BYTE75= 000113
                                                                                                         PROB
                                                                      IHIGH·=·******* GX
                                                                                                                    002072RG
                                   BYTE76= 000114
                                                                      ILOW = ***** GX
                                                                                                         PR1
                                                                                                                    001362RG
                                                                                                                                      002 · Q$RDCD = · 000005
                                   BYTE77= 000115
                                                                      INCVAL = * ****** GX
                                                                                                         PRILH - 000006 G
                                                                                                                                            Q$RDMD= 000006
BYTE26= 000032
BYTE27= 000033
                                   BYTE78= 000116
                                                                                                                                     092 0$REBK = 001000
002 0$RBC = 005000
0$RSC = 005000
0$RSET = 000010
0$RSET = 000010
                                                                                                         PRITBL 000030RG
                                                                      KILL: = эжжжжжж GX
                                   BYTE79= 000117
                                                                      LDAM-
                                                                                 000332RG
                                                                                                   002 PRIX 002326F
002 QR$CRI= 176420
002 QR$CR2= 176422
                                                                                                                    002326R
BYTE28= 000034
                                   BYTE8 = 000010
                                                                                 000366RG
BYTE29= 000035
BYTE3 = 000003
                                   BYTE80= 000120
                                                                      LDBT
                                                                                 001112RG
                                   BYTE81 = . 000121
                                                                      LDCM-
                                                                                 000422RG
                                                                                                   002.QR$LBR=.176424
BYTE30= 000036
                                   BYTE82=-000122
                                                                                                   0$ATTN= 000100
002 0$BCL = 000001
002 0$CCCP= 000040
                                                                      LDCNTL= ******* GX
BYTE31= 000037
                                   BYTE83= 000123
                                                                                 000456RG
                                                                      LDIB
                                                                                                                                            Q$SP2. = . 000340
BYTE32= 000040
                                                100124 . LT:0B 000654RG 002 เตรเบเบา= ขอของข
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                                  BYTE84= 000124
                                                                                                                                            RGO.EN= 000200
```

```
TMEM --- MACRO -M1110 27-MAR-80 15:37 PAGE 6-5
SYMBOL TABLE --- Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
SYMBOL TABLE
RGQ.VA= 020000
                                                    T$CLK - = - 002000
                                                                                                       WORD1 ≃ 000002
                                                                                                                                                           WORD40= 000120
                                                                                                                                                                                                               WORD71=-000216
           = · жжжжжж GX ·
                                                    T$DISK= 000200
T$DRD = 000004
                                                                                                       WORD10= 000024
WORD11= 000026
                                                                                                                                                           WORD41= 000122
                                                                                                                                                                                                              WORD72= 000220
WORD73= 000222
RTHPT = ****** GX
                                                                                                                                                           WORD42= 000124
SCAN = ********* GX
SEQ:CI=*000010
                                                    T$EMEM= · 010000
                                                                                                        WORD12= 000030
                                                                                                                                                          MORD43= 000126
                                                                                                                                                                                                               WORD74= 000224
                                                    T$F$AA=.000000
                                                                                                        WORD13= 000032
                                                                                                                                                           WORD44= : 000130
                                                                                                                                                                                                               WORD75= 000226
5$CLR -= - 000000
                                                    T$FSAB= 000004
                                                                                                       WORD14=-000034
                                                                                                                                                           WORD45= 000132
                                                                                                                                                                                                              WORD76=-000220
WORD77=-000232
WORD78=-000234
5$LA: =:000001
                                                    T$F$AC= 000014
                                                                                                       WORD15= AAAA36
                                                                                                                                                           WORD46= 000134
S$QB· = 000005
                                                    T$F$B2=-000010
                                                                                                        WORD16 = . 000040
                                                                                                                                                          WORD47 = . 000136
S$QR· = 0000006
                                                    T$IB· ≃∵000026
                                                                                                        WORD17 - 000042
                                                                                                                                                          WORD48 = - 000140
                                                                                                                                                                                                              WORD79= 000236
S$QX.
            =·000004
                                                    T$IBAR= 000024
                                                                                                       WORD18= 000044
                                                                                                                                                           WORD49= 000142
                                                                                                                                                                                                              WORD8 - 000020
             = 000007
                                                                                                       WORD19=-000046
WORD2-=-000004
                                                    T$IBE - - 020000
                                                                                                                                                           WORD5 = 000012
                                                                                                                                                                                                              WORD80= 0000240
S$S1
             --000010
                                                    T$IBF -- 040000
                                                                                                                                                          WORD50 = 000144
WORD51 = 000146
                                                                                                                                                                                                              WORD81 = 000242
             = 000014
                                                    T$ICD - = -000040
S$S2
                                                                                                       WORD20= 000050
                                                                                                                                                                                                              WORD82= 000244
 TD$CTR= 176370
                                                    T$MODE = . 004000
                                                                                                       WORD21=-000052
                                                                                                                                                           WORD52= 000150
                                                                                                                                                                                                              WORD83= : 000246
TD$CTW= 176360
TD$INL= 004000
                                                    T$0B · = · 000036
                                                                                                       WORD22= 000054
                                                                                                                                                          WORD53 = 000152
WORD54 = 000154
                                                                                                                                                                                                              WORD84= 000250
                                                    T$0BE - - 004000
T$0BF - - 010000
                                                                                                        WORD23 - 000056
                                                                                                                                                                                                              WORD85= 000252
TD$MEM= 000270
                                                                                                       WORD24= 000060
                                                                                                                                                           WORD55= 000156
                                                                                                                                                                                                              WORD86 = 000254
WORD87 = 000256
WORD88 = 000260
TD$0AR= 176344
                                                    T$0BRA= 000034
                                                                                                       WORD25= 000062
                                                                                                                                                           WORD56=-000160
TD$0TR= 176346
                                                    T$0BWA= .000032
                                                                                                       WORD26 = 000064
                                                                                                                                                          WORD57=-000162
TD$QRD= 000274
                                                    T$0UTA= 100000
                                                                                                       WORD27=-000066
                                                                                                                                                          WORD58=-000164
                                                                                                                                                                                                              WORD89--000262
TD$SW-=-176376
                                                                                                                                                          WORD59= 000166
WORD6 = 000014
                                                    T$RBD0=.000200
                                                                                                       WCRD28= 000070
                                                                                                                                                                                                              WORD9 = 000022
  TD$TAR= · 176372
                                                    T$RNB - = - 000040
                                                                                                       WORD29=-000072
                                                                                                                                                                                                              WORD90= 000264
WORD91= 000266
                                                    T$RSET= 040000
  "9$TAW= 176362
                                                                                                       WORD3 = 000006
                                                                                                                                                           WORD60= 000170
10$TDR=-176374
TD$TDW=-176364
                                                              = 0000022
                                                                                                       WORD30= 000074
                                                    T$SC∙
                                                                                                                                                           WORD61=-000172
                                                                                                                                                                                                              WORD92 = . 000270
                                                    T$SCLK= 020000
                                                                                                       WORD31 = 000076
                                                                                                                                                          WORD62= 000174
WORD63= 000176
                                                                                                                                                                                                              WORD93= 000272
THIGH = ****** CX
                                                    T$SEG! = 0000000
                                                                                                        WORD32= 000100
                                                                                                                                                                                                              WORD94= 000274
WORD95= 000276
 TLOW: = ***** GX
                                                    T$SEG2= 0000001
                                                                                                       WORD33 = 000102
WORD34 = 000104
                                                                                                                                                           WORD64= 000200
 T$AD· = 000020
                                                    T$SEG3=-000002
                                                                                                                                                          WORD65= 000202
WORD66= 000204
                                                                                                                                                                                                              WORD96 - 000300
T$BA - - 000002
                                                    T$SO· = 0000001
T$UBUS= 100000
                                                                                                       WORD35= 000106
                                                                                                                                                                                                              WORD97= 000302
             = 000010
                                                                                                       WORD36=-000110
                                                                                                                                                          WORD67= 000206
                                                                                                                                                                                                              UORD98=-000304
T$BSO = 100000
T$BT = 000020
                                                    T$1CLK=-000400
                                                                                                       WORD37=-000112
                                                                                                                                                           WORD68 - 000210
                                                                                                                                                                                                              WORD99= 000306
                                                    T$8BEN= 000020
                                                                                                                                                          WORD69=.000212
WORD7 =.000016
                                                                                                       WORD38=-000114
                                                                                                                                                                                                              WRDVAL = . 000310:
T$BTAR = . 000030
                                                   UBD:IN= 000020
WORD0 = 000000
                                                                                                       WORD39 - 000116
                                                                                                                                                                                                              XTREAD=: 001000
XTWRTE=: 000400
T$BTD -- 002000
T$CD -- 000100
                                                                                                       WORD4 = 000010
                                                                                                                                                          WORD70= 000214
                 ававав
 - ABS:
                                         999
                 000000
                                         001
                                         002
ERRORS DETECTED:
                                      0
VIRTUAL·MEMORY·USED:
                                               3537 WORDS: (-14 PAGES)
DYNAMIC MEMORY: 4916 WORDS: (18 PAGES)
ELAPSED:TIME: 00:00:51
(MEM.FMEM/-SP=[20.1]IM.[20.1]TMEM
                                                                                                                                                                                                                    the state of the s
```

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TDATA.
           MACRO M1110 27-MAR-80 15:36 PAGE_5
                                                Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
                                                                       .FITLE - FDATA
        234567
           000000
                                                                       .PSECT
                                                                                  TDATA
                                                                       .LIST
                                                                                  MEB.
                                                                       TERM-DETECTOR 'MANUAL' DEBUGGING AIDS: :
DATA-COMMANDS (INPUT-BUFFER-AND-BYTE-TRANSLATOR)
                                                                                  5:
FILL LOCAL BUFFER WITH DATA FOR TO INPUT BUFFER
CHANGE DATA IN LOCAL BUFFER OR IN LOCAL BYTE
TRANSLATOR TABLES
LIST CONTENTS OF LOCAL DATA BUFFER OR LOCAL
BYTE TRANSLATOR TABLES
MARK THE END OF THE LOCAL DATA BUFFER
PFON LOCAL BUFFER
       10
                                                                       DΑ
       11
                                                                      СН
       13
                                                                      LI
       14
       15
                                                                      ΕN
                                                                      DF
                                                                                  READ LOCAL DATA BUFFER OR LOCAL BYTE TRANSLATOR
       17
                                                                                   TABLES FROM DISK
       18
19
                                                                                  TRANSFER LOCAL DATA BUFFER TO TERM DETECTOR.
INPUT BUFFER OR LOCAL BYTE TRANSCATOR TO THE
                                                                      TR
      201
223
24
25
22
28
29
31
                                                                                   TERM DETECTOR BYTE TRANSLATOR
                                                                      ONCE:A:COMMAND:HAS:BEEN:EXECUTED (OR:AN:ERROR:ENCOUNTERED)
THIS:MODULE:RETURNS:CONTROL:TO:THE:MODULE:TMAIN:AT:LOCATION
'COMXX':
                                                                      .MCALL · OPENSR,GETS,CLOSES
                                                                      TABLE OF VALID BUFFER MNEMONICS AND THEIR ASSOCIATED
                                                                      ROUTINE ADDRESSES
      32
33
34
           000000
                                                          CH1TBL::
           000000
000002
                                       102
                                                                       .ASCII
      35
                                                                                                          ; INPUT BUFFER
                       0002601
                                                                      . Lineb
                                                                                  CHIB
      36
37
38
39
40
           000004
                           102
                                       124
                                                                      .ASCII.
                                                                                  ZBTZ
                                                                                                          :BYTE · TRANSLATOR
           000006
                       0003761
                                                                                  СНВТ
                       000002
                                                          CHILN.
                                                                                  <.-CH1TBL>/4
      41
42
43
          000010
000010
                                                          LIITBL::
                           111
                                       102
                                                                      .ASCII
                                                                                 ZIBZ
LIIB
                                                                                                          : INPUT BUFFER
      44
           000012
                       0006723
                                                                      .WORD
      45
46
47
          000014
                           102
                                       124
                                                                      .ASCII
                                                                                  /BT/
                                                                                                          :BYTE TRANSLATOR ?
          000016
                      001072
                                                                      .WORD
                                                                                  LIBT
                       000002
                                                          LI1LH
                                                                                  <.-LI1TBL>/4
      48
      49
50
51
52
53
                                                                      DATA FILES
          000020
                                                          DF1TBL::
          000020
000022
                                       102
                                                                      .ASCII
                                                                                  /IB/
                                                                                                         ; INPUT-BUFFER
                      001366'
102
                                                                                 DF IB
                                                                      .WORD
     54
55
56
57
          000024
                                       124
                                                                      .ASCII.
                                                                                                          : BYTE · TRANSL
          000026
                      0015761
                                                                      .WORD
                                                                                 DFBT
                                                                                                       THE THE WAR
                      000002
                                                          DF1LN-
                                                                                  <.-DF1TBL>/4
                                                                                              CIA-RDP85-00514R000200020001-3
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TDATA
                    O M1110 27-MAR-80 15:36 PAGE 5-1
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        58
                                                                                   TRANSFER
        59
        60
             000030
                                                                      TRITBL::
        61
62
             000030
                                               102
                                                                                                                             ; INPUT BUFFER
             000032
                           962134
                                                                                    .WORD
                                                                                                 TRIB
        63
64
             000034
                                102
                                               124
                                                                                    .ASCII.
                                                                                                 ZBTZ
                                                                                                                             :BYTE:TRANSLATOR
                                                                                                 TRBT
                           002226
             000036
                                                                                    . WORD
        65
66
67
68
69
70
71
72
                           000002
                                                                      TR1LH
                                                                                                  <.-TR1TBL>/4
                                                                                   DATA:
                                                                                   NO OPERANDS
                                                                                   THIS ROUTINE PUTS OUT PROMPTS FOR DATA AND READS THE COMMAND LINE. IT THEN CALLS A SUBROUTINE IN THAIN WHICH PROCESSES.

THE COMMAND LINE AND PLACES IT INTO TWO BUFFERS. ONE OF THE COMMEND LINE INPUT TO BE:

USED FOR VERIFICATION: THE OTHER BUFFER IS THE 6-BIT BYTE
BUFFER WHICH WILL EVENTUALLY BE TRANSFERRED TO THE
TERM DETECTOR INPUT BUFFER (SEE THE 'TR' AND 'RU:
         73
74
75
         76
         77
78
                                                                                   COMMANDS).
         80
        81
82
                                                                                   NB. SINCE THE LOCAL INPUT BUFFER IS TRANSFERRED TO
                                                                                   THE TERM DETECTOR IN 16-BIT WORDS AND THERE ARE 8
6-BIT BYTES IN 3 16-BIT WORDS, THE NUMBER OF 6-BIT
BYTES IN THE LOCAL DATA BUFFER SHOULD BE DIVISIBLE
BY 8. NO CHECKING IS DONE, HOWEVER.
         83
         84
85
86
                                                                                   CLEAR · LOCAL · DATA · BUFFER · (BOTH · THE · 6-BIT · BYTE · TABLE
         87
         88
                                                                                   AND THE 8-BIT ASCII MIRROR TABLE).
         89
         91
              000040
                                                                      DA1::
                                                                                                                           ;CLEAR · BIT · SHIFT · COUNTER · · · · · ;CLEAR · LENGTH · OF · 'DATA · · · · ;POINT · TO · 6 - BIT · BYTE · TABLE · +1,R1 ·;NUMBER · OF · WORDS · IN · TABLE ;CLEAR · DATA · TABLE ·
         92
              000040
                            005067
                                          000000G
                                                                                   CLR
                                                                                                  COUNT:
         93
              000044
                            005067
                                          000000G
                                                                                   CLR
                                                                                                 DATALN:
                            012700
              000050
                                          000000G
                                                                                   MOV
                                                                                                  #DTBL,R0
                                          001000
         95
              000054
                            012701
                                                                                   MOV
                                                                                                  #<<1364.*3>/8.>
         96
97
                            005020
005301
              000060
                                                                      1$:
                                                                                                  (R0) +
              000062
                                                                                    DEC
                                                                                                 R1
              000064
                            001375
                                                                                                  15
         99
       100
              000066
                            012700
012701
                                          000000G
                                                                                    MOV
                                                                                                  #DSAVE,R0
                                                                                                                             ;POINT-TO-ASCII-MIRROR-TABLE
;NUMBER-OF-WORDS-
;CLEAR-TABLE-
              000072
                                                                                   MOV
CLR
        101
                                          001252
                                                                                                  #1364./2,R1
              000076
        102
                            005020
                                                                      2$:
                                                                                                  (R0) +
        103
              000100
                            005301
                                                                                    DEC
                                                                                                  R1
        104 000102
                            003375
        105
                                                                                   READ-'DATA' FROM-CONSOLE-
CALL-ROUTINE TO-ADD-1 COMMAND-LINE'S-WORTH OF-DATA
TO THE-TABLES, A-<CR> RESPONSE-TO-THE-PROMPT
TERMINATES-THE-COMMAND.
        106
        107
        108
        109
       110
              000104
                           012704
                                          рававав
                                                                                                                             :R4 -> 6-BIT BYTE TABLE
:R5 -> MIRROR INPUT TABLE
:GET COMMAND LINE
       111
                                                                                    MOV
                                                                                                  #DTBL,R4
       112-000110
                            012705
                                          000000G
                                                                                                 #DSAVE,R5
PC,GCONLY
                                                                                    MOV
       113 000114
                            004767
                                                                                    JSR
              000120
                            005767
                                          000000G
                                                         Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
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122.000144

000167

000000G

COMXX.

JMP

whatever to receive

```
0 M1110 27-MAR-80 15 36 PAGE 5 Release 2005/07/1 CIA-RDP85-00514R000200020001-3
TDATA.
     124
                                                             CHANGE
     126
                                                             PERFORM SECOND LEVEL PARSING
     127
                                                                  IN THE COMMAND:
     128
                                                             >CH IB 0
     129
                                                             PARSE THE . * IB *
     130
     131
132
                                                   CH1::
     134 000150
                    004767
                              PARABAGE
                                                             JSR
                                                                                            ;FIND.THE.BUFFER.MNEMONIC.IN COMMAND.LIÑE
     135
         000154
                    103004
                                                             BCC
                                                                        1$
                                                                                            :OK, CONTINUE
     136
          000156
                    004767
                              000000G
                                                             JSR
                                                                        PC.ERR3
                                                                                            ; 'MISSING OPERAND'
     137
          000162
                    000167
                                                                        CHIX
     138
     139
                                                             MATCH THE MNEMONIC FROM THE COMMAND LINE AGAINST THE
     140
                                                             TABLE OF VALID MHEMONICS.
     141
     142.000166
143.000172
                                                                                            ; NUMBER · OF · TABLE · ENTRIES ·
; TABLE · OF · RESPONSES / RTN · ADDRESSES
; CHECK · COMMAND · LINE · AGAINST · TABLE
                    0.12700
                              000002
                                                   1$:
                                                             MOV.
                                                                        #CH1LN,R0
                    012702
                              0000000
                                                             MOV.
                                                                        #CHITBL, R2
     144
                              000000G
                                                              JSR
                                                                       PC.SCAN-
     145
         000202
                    103004
                                                             BCC-
                                                                        2$
                                                                                            ;OK, CONTINUE
                              ARRAGAG
                                                                       PC. ERR6
     146
          000204
                    994767
                                                             JSR
                                                                                            ; "INVALID - MEMORY - MNEMONIC"
          000210
                    000167
                              000332
                                                                       CHIX
     148
     149
                                                             SAVE - THE - POINTER - TO - THE - ROUTINE - ASSOCIATED WITH - THE
                                                             BUFFER: R1 -> ROUTINE ADDRESS:
SCAN-THE COMMAND LINE FOR THE 'START CHANGE ADDRESS'.
     150
     151
     152
                                                              THE START ADDRESS IS ZERO-RELATIVE.
     153
                                                                                            SAVE POINTER TO RTH ADDRESS
LOCATE START CHANGE ADDR IN COMMAND LINE
OK, CONTINUE
          000214
000220
                    010167
                                                                       R1.RTHPT
     154
                              BRARAGE
                                                             MOV.
                                                   25:
                                                                        PC.FIND
     155
                    004767
                               aggaggs.
                                                             JSR.
          000224
                     103003
     156
                                                             BCC
                                                                        3$
          000226
                     004767
                               000000G
                                                              JSR
                                                                        PC, ERR3
                                                                                              'MISSING OPERAND'
     158
          000232
                    000545
                                                             BR
                                                                                            ;EXIT
     159
                                                                                            CONVERT COMMAND LINE VALUE TO BINARY CONVERSION SUCCESSFUL
                    994767
                                                   3$:
                                                             JSR
          000234
                               000000G
                                                                        PC*PACK
      160
          000240
                     103003
                                                             BCC
                                                                        4$
          000242
                    004767
                               000000G
                                                              JSR
                                                                        PC.ERR4
                                                                                            ; 'INVALID NUMERIC VALUE'
     162
          000246
                    000537
                                                             BR
                                                                        CHIX
     163
     164
                                                              JUMP . TO . THE . ROUTINE . TO CHANGE . BUFFER . CONTENTS .
     165
                                                                        RTHPT R1
          000250
                                                             MOV:
                    016701
                               BERRARG.
                                                                                            : POINT - TO - ROUTINE
     166
                                                   45:
      167
          000254
                               000000
                    000171
                                                                                            : GO: THERE
     169
170
                                                              INPUT-BUFFER
      171
                                                                   SINCE: THE: LOCAL: INPUT: BUFFER IS: TRANSFERRED: TO:
                                                             THE TERM DETECTOR IN 16-BIT WORDS AND THERE ARE 8
6-BIT BYTES IN 3 16-BIT WORDS THE NUMBER OF 6-BIT BYTES IN THE LOCAL DATA BUFFER SHOULD BE DIVISIBLE
     176
177
                                                             BY 8. NO-CHECKING-IS-DONE, HOWEVER.
          000260
                                                   CHIB::
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                              000000G
                    005767
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TDATA.
                                                                                     BNF
                                                                                                                                :YES, CONTINUE
             000264
                            001003
                                                                                                   PC, ERR7
                            004767
                                          000000G
                                                                                     JSR.
                                                                                                                                :DATA MUST PRECEED CHANGE
              000266
                                                                                                   CHIX
       183
              000272
                           000525
       184
                                                                                     DETERMINE-WHERE IN THE TWO TABLES (6-BIT-BYTE AND 8-BIT-ASCII MIRROR TABLE) TO START CHANGING, DO THIS FOR THE 6-BIT BYTE TABLE BY CONVERTING THE START CHANGE ADDRESS FROM THE COMMAND LINE INTO A AN OFFSET INTO THE 6-BIT BYTE TABLE, THE FIELD OFFSET IS THE OUTPUT FROM THE ROUTINE FOR THE ADDRESS FROM THE FIELD OFFSET IS THE START CHANGE ADDRESS FROM THE COMMAND LINE (IN BINARY).
       185
       186
       187
       188
       189
       198
       191
       192
        193
              000274
                             004767
                                           000000G
                                                                       40$:
                                                                                     JSR
                                                                                                    PC.OFFSET
                                                                                                                                ;CALCULATE 6-BIT TABLE OFFSET
                                                                                                   #DTBL,R4
OFF6,R4
                                                                                                                                ;R4 -> 6-BIT.TABLE
;START.CHANGING.HERE:
;R5 -> 8-BIT.MIRROR.TABLE:
                            012704
066704
        194
              ийизии
                                           999999G
                                                                                     MOV.
        195
                                           000000G
                                                                                     ADD
              000304
                                                                                                    #DSAVE,R5
              000310
                             012705
                                           000000G
        197
              000314
                             066705
                                           000000G
                                                                                     ADD:
                                                                                                   BINWD, R5
                                                                                                                                :START · CHANGING · HERE
                                          000000G · 000000G
        198
              000320
                            016767
                                                                                     MOV
                                                                                                   BINWD, CHLEN.
                                                                                                                                199
                                                                                     PUT-OUT-PROMPT-FOR-CHANGE-DATA: CALL-SUBROUTINE-TO PROCESS-COMMAND-LINE-(SEE-*DA* COMMAND-ABOVE).

ADD-THE-NUMBER-OF-6-BIT-CHARACTERS-FROM-THE-
       200
       201
        202
       293
                                                                                     PROCESSED COMMAND LINE TO THE CHANGE START
                                                                                     ADDRESS.
        204
        205
        206
              000326
                             004767
                                           000000G
                                                                       5$:
                                                                                      JSR
                                                                                                    PC.GCONLY.
                                                                                                                                :GET-COMMAND-LINE
                                                                                                                                ;ANYTHING THERE;
;NO; <CR> RESPONSE;CHANGE 'DATA' TABI
;ERROR; EXIT
                             005767
        207
              000332
                                           000000G
                                                                                      TST
                                                                                                    GCMLEH.
                             001407
        208
              000336
                                                                                     BEQ
                                                                                                    6$
              000346
                             004767
                                           000000G
                                                                                                    PC.DBLD
                                                                                                                                                          TABLE :
        210
              000344
                             103500
                                                                                     BCS
                                                                                                                                :ACCUMULATE LENGTH OF DATA BUFFER : PROMPT FOR MORE CHANGE DATA
        211 000346
                             066767
                                           000000G · 000000G
                                                                                     ADD
                                                                                                    DPLUS, CHLEN-
                             000764
        212-000354
        213
                                                                                     SPECIAL PROCESSING:
THE FIELD TOATALNT CONTAINS THE NUMBER OF 6-BIT BYTESIN THE LOCAL DATA BUFFER (SEE TOAT COMMAND). IF THE CHANGE COMMAND IS IN THE FORM:
        215
216
        218
                                                                                     >CH-IB:2:

AND THE DATA BUFFER CONTAINS 'ABCDE' AND THE CHANGE DATA IS:

1234', THE DATA BUFFER WILL CONTAIN AB1234' AND DATALN WILL

BE UPDATED TO 6, IF, HOWEVER, THE CHANGE DATA IS: 12' THEN

THE DATA BUFFER WILL CONTAIN AB12D' AND DATALN WILL REMAIN

AT 5. THE FIELD DATALN CONTAINS THE LENGTH OF THE DATA

BUFFER BEFORE ANY CHANGES, THE FIELD CHANGES. THE LARGER

OF THE TWO WILL BECOME THE NEW DATALN:
        220
        221
        223
        224
        226
        227
                                           000000G 000000G 6$:
                                                                                      CMP
                                                                                                    CHLEN, DATALN
        228 - 000356
                             026767
                                                                                                                                 :WHICH-IS-BIGGER
               000364
                                                                                      BLE
                                                                                                                                ; DATALN
                             003470
                                                                                                    CH1X
        230
231
232
              000366
                             016767
                                           000000G-000000G
                                                                                      MOV
                                                                                                    CHLEN, DATALN.
                                                                                                                                 :REPLACE DATALN
              000374
                             000464
                                                                                                    CH1X
                                                                                                                                 :EXIT-
                                                                                      BYTE TRANSLATOR THE FIELD BINUD: CONTAINS THE CHANGE START ADDRESS WHICH IS A ZERO-RELATIVE WORD NUMBER. EG. THE COMMAND!
        234
235
        236
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FM R. S. C.

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238
                                                                WILL-START-CHANGING-THE-BYTE-TRANSLATOR-OVERRIDE-TABLE (SEE-BELOW) AT-WORD-7.
239
240
241
242 999376
                                                     CHBT::
                                                                            BINWD.#<BTEND-BTRANS> :START-ADDRESS-IN-RANGE- 3$ :YES. CONTINUE- PC.ERR20 :'START-ADDRESS OUT-OF-RANGE HIGH&U
243
     000376
                 026727
                             000000G-000000C
                                                                 CMP
244 000404
                 103403
                                                                 BLO:
245 000406
                 004767
                             000000G
                                                                 199
246
     000412
                 000455
                                                                                                    :EXIT
                                                                            CHIX
247
                                                                THE CHANGE COMMAND CREATES A BYTE TRANSLATOR OVERRIDE TABLE (WHICH IS A COMPLETE COPY OF THE BYTE TRANSLATOR TABLE). ALL. CHANGES ARE APPLIED TO THE OVERRIDE TABLE. THE OVERRIDE TABLE IS TRANSFERED TO THE TERM DETECTOR BY EITHER THE TRY OR THE TRUY COMMAND. IF THIS ROUTINE IS BEING ENTERED FOR THE FIRST TIME, COPY THE BYTE TRANSLATOR TABLE TO THE OVERRIDE.
248
249
256
251
252
253
255
     000414
                 932767
256
                             000000G-000000G-3$:
                                                                 BIT
                                                                             #RIDE,BASE
                                                                                                    #FIRST-USE-OF-1CHANGE1
                                                                                                    ; POINT TO OVER THE TABLE : ALONE : FLAG ROUTINE : ENTERED : POINT TO DEFAULT TABLE : POINT TO OVER THE TABLE :
      000422
                 001014
                                                                 BNE
                                                                             4$
     000424
                 052767
                             000000G · 000000G
                                                                             #RIDE, BASE
                                                                 BIS
259
     000432
                 012700
                             000000G
                                                                             #BTRANS, RØ
260 000436
                 012701
012702
                             BRABBAG
                                                                 MOV.
                                                                             #BTOVER,R1
261 000442
                             имимическа
                                                                 MOV.
                                                                            #<BTEND-BTRANS>/2.R2:;NUMBER:OF:WORDS:
(R0)+,(R1)+ ;LOAD:OVERRIDE:TABLE:
     000446
                                                     30$:
                                                                 MOV.
263 000450
                 005302
264 000452.
                 001375
                                                                             30±
265
                                                                 LOAD THE CHANGE START ADDRESS IN BYTES INTO R2
267
268 000454
                 012702
                             ABBBBBBB
                                                     4$:
                                                                 MOV.
                                                                             #BTOVER, R2.
                                                                                                    :POINT-TO-OVERRIDE TABLE
     000460
                 016703
269
                             000000G
                                                                 MOV.
                                                                            BINWD,R3
                                                                                                    :LOAD·WORD·OFFSET:
:SHIFT·FOR·BYTE·OFFSET
     000464
                  006303
                                                                 ASI -
                                                                             R3
271
                                                                                                    START CHANGING HERE
     000466
272
                                                                 PROMPT FOR A LINE OF CHANGE DATA, THE COMMAND LINE MAY CONTAIN MORE THEN ONE WORD OF DATA, EG: >000000 000000 000000 000000
273
                                                                 CHANGE 6 CONTIGUOUS WORDS WORTH OF BYTE TRANSLATOR CODES. A < CR> RESPONSE TO THE PROMPT TERMINATES THE COMMAND.
276
277
279
     000470
                 004767
                             000000G
                                                                 JSR-
                                                                             PC . GCONLY -
                                                                                                    :READ - COMMAND - LINE
                                                                                                                                                     and Articles
288 888474
                 004767
                             000000G
                                                                 JSR
                                                                            PC,FIND.
CH1X
                                                                                                    ;LOCATE · AN · OVERRIDE · WORD
281
     000500
                  103422
                                                                                                     ;<CR> RESPONSE, EXIT-
                                                                  \begin{array}{lll} {\tt CONVERT: THE: OVERRIDE: VALUE: TO: BINARY: ANY: ERROR: IN \\ {\tt CONVERSION: TERMINATES: THE: COMMAND: } \end{array} 
283
284
285
286
      000502
                  004767
                             000000G
                                                                 JSR
                                                                             PC*PACK
                                                                                                     CONVERT NUMERIC VALUE
                                                                                                                                                   ر د د او د الم
287
     000506
                  103003
                                                                                                     :OK, CONTINUE
                                                                                                     'INVALID NUMERIC VALUE'
     000510
288
                  994767
                             000000G
                                                                 JSR
                                                                             PC, ERR4
     000514
                 000414
                                                                             CHIX
290
291
292
                                                                 CHECK-FOR-TABLE-OVERFLOW. IF-OVERFLOW, TERMINATE-COMMAND.
293 000516
                 020227
                             000000C
                                                                             R2,#BTOVER+<BTEND-BTRANS> ;END.OF.TABLE.REACHED
                                                     8$:
     000522
                 103403
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TDATA:

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295 000524 004767 296 000530 000406 297 000532 016722 298 000536 004767 299 000542 103357 300 000544 000751 301 302	. 000000G.	10\$:	JSR BR MOV JSR BCC BR	PC,ERR17 CH1X BINWD,(P2)+ PC,FIND 6\$ 5\$;TABLE:OVERFLOW ;EXIT: ;ENTER:WORD:IN:BT:TABLE: ;LOCATE:NEXT:OVERRIDE:WORD: ;PROCESS STRING: ;GET:COMMAND:LINE:
303 000546 304 000546	² попопос.	CH1X:	.īMP ·	COMXX.	

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TDATA.
    307
                                                       LIST.
    308
    309
                                                       PERFORM- SECOND - LEVEL - PARSING -
    310
                                                       EG. IN THE COMMAND: >LI · IB · 0
    312
                                                       PARSE - THE - 1 IB1
    313
314
    315 000552
316 000552
317 000556
                                              LII::
                           000000G
                                                       JSR
                                                                PC.FIND.
                                                                                  :LOCATE · BUFFER · MNEMONIC · IN · COMMAND · LINE ·
        000552
                  004767
                  103004
                                                       BCC.
                                                                1$
                                                                                  ;OK, CONTINUE
                                                                PC, ERR3
    318
        000560
                  004767
                           000000G
                                                       JSR
                                                                                  : 'MISSING OPERAND'
                                                       IMP
    319 000564
320
                  000167
                                                                                  :EXIT-
                           000424
                                                                1.112
    321
                                                       MATCH: THE: MNEMONIC: FROM: THE: COMMAND: LINE: AGAINST: THE
    322
                                                       TABLE OF VALID MNEMONICS.
     323
    324 000570
                  012700
                           000002
                                              1$:
                                                       MOV
                                                                #LI1LH,R0
                                                                                  : NUMBER - OF - TABLE - ENTRIES -
         000574
                  012702
                           000010
                                                       MOV.
                                                                #LI1TBL,R2
                                                                                  ; POINT TO TABLE
    325
                                                       JSR BCC
                                                                PC.SCAN
2$
    326
         000600
                  004767
                           000000G
                                                                                   :MATCH - AGAINST - COMMAND - LINE
    327
         000604
                  103004
                                                                                  :MATCH:WAS:MADE
                                                       JSR
                                                                PC.ERR6
                                                                                  ; 'INVALID MEMORY MNEMONIC'
    328.000606
                  004767
                           000000G
         000612
                  000167
                           000376
                                                       JMP
                                                                LIIX
    330
331
                                                       SAVE THE POINTER TO THE ROUTINE ASSOCIATED WITH THE
                                                       SCAN-THE-COMMAND-LINE-FOR-THE-*START-LIST-ADDRESS*
     332
     333
    334
335
                                                       THE START ADDRESS IS ZERO-RELATIVE:
                  010167
     336
         000616
                           000000G
                                                       MOV-
                                                                R1.RTHPT
                                                                                   :SAVE - POINTER
                                                                                  :LOCATE LIST START ADDR IN COMMAND LINE
     337
         000622
                  004767
                           000000G
                                                       JSR-
                                                                PC.FIND.
     338
         000626
                  103004
                                                       BCC
                                                                3$
                                                                PC,ERR3
                  йй4767
                           ARRAGAG.
                                                                                  : "MISSING OPERAND"
     339
         999639
                                                       JSR
                                                       JMP
     340
         000634
                  000167
                           000354
                                                                LIIX
                                                                                   :FXIT-
                                                       JSR
BCC
                                                                                   CONVERT COMMAND LINE VALUE TO BINARY
                  004767
                           000000G
                                                                PC PACK
     341
         000640
                                                                                   ; CONVERSION SUCCESSFUL
     342
         000644
                   103004
                                                                 4$
                                                       JSR
                                                                PC.FRR4
     343 000646
                  004767
                           имимия.
                                                                                   : "INVALID - NUMERIC - VALUE"
                  000167
     344
         000652
                           000336
                                                       JMP.
                                                                1118
     345
     346
                                                       JUMP TO THE ROUTINE TO LIST BUFFER CONTENTS.
     347
                                                       JSR
                                                                                   :HOW-TO-STOP-PRINT
         000656
                  004767
                           ARRARAG.
                                              4$:
                                                                PC. HANG
     348
                                                                                  :POINT TO ROUTINE :JUMP TO ROUTINE
                  016701
                                                       MOV
                                                                RTHPT, RI
     349
         000662
                           имимина
                                                       JMP
         000666
                  000171
                           000000
     351
     352
     353
                                                       INPUT-BUFFER
     354
     355
     356
                                                       CHECK - WHETHER - THERE - IS ANY - 6-BIT BYTE - DATA IN - THE
     357
                                                       TABLE:
                                              LIIB::
     359
         000672
     360 000672
                                                                DATALN
                                                                                   ;HAS. 'DATA' COMMAND. BEEN. EXECUTED
                  005767
                           000000G
         000676
                                                                                   ;YES, CONTINUE
                  001003
     362.000700
                  004767
                           000000G
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```
LIAX
363 000704
                000543
364
                                                             GHECK - WHETHER - THE - START - LIST - ADDRESS - IS - IN RANGE
365
                                                                                              ; IS-LIST START-ADDRESS-IN-RANGE; YES, CONTINUE; OUT-OF-RANGE.
366
                           000000G 000000G 20$:
                                                                        BINWD.DATALN
     000706
                 026767
367
                                                             BLT.
                                                                        25$
PC,ERR9
368 000714
369 000716
                002403
                                                             ISR.
                004767
                                                             BR
                                                                        LIIX
370 000722
371
                                                             LIST FROM THE 8-BIT ASCII MIRROR TABLE, NOT FROM THE 6-BIT BYTE TABLE, SEE THE "DA" ROUTINE FOR NOTES ON THE CREATION OF THE MIRROR TABLE, THE FIELD BINWD?
372
373
374
                                                             CONTAINS THE LIST START ADDRESS.
375
376
                                                                                               ; POINT TO ASCII VERSION OF 'DATA:
                                                             MOV
                                                                        #DSAVE,R0
                            000000G
                                                  25$:
377
      000724
                 012700
                                                                                               START LIST HERE:
CLEAR PRINT LINE CHAR COUNTER
                                                             ADD.
                                                                        BINWD,R0
                 066700
                            000000G
                                                              CLR
                                                                        R1
     000734
                 005001
                                                                                               :R5 -> PRINT LINE
                                                             MOV
                                                                         #PRINT,R5
 380 000736
                 012705
 381
                                                              THE LOOP FLAG IS USED TO CONTROL THE LIST COMMAND, ANY CHARACTER ENTERED FROM THE TERMINAL ENDS THE COMMAND AS DOES A 0 VALUE IN THE DATA TABLE.
 383
 384
 385
                                                                                               ;FINISHED.?.
;YES, EXIT.
;END.OF.TABLE
                                                                         #LOOP, BASE
                            000000G 000000G 3$:
      000742
                 832767
 386
                                                              BEQ.
TSTB
      000750
                                                                         LHX
 387
                 001521
                                                                         (RØ)
                                                                                               :NO, CONTINUE:
;PRINT-LAST-LINE:
;AND-EXIT-
                                                                         30$
                                                              BNE
 389
      000754
                 001003
                                                              JSR
                                                                         PC,CONSOL.
                            000000G
 398
      000756
                 004767
                                                              BR
                                                                         LHX
                 000514
 39 i
      000762
 392
                                                              THE BINARY VALUES 15 (CARRAIGE RETURN) AND 12
 393
                                                              (LINE FEED) ARE PRINTED OUT AS <15> AND <12>.
 394
 395
                                                                                               :<CR> IN ASCII-DATA:
:PROCESS <CR> OF <LF>
:ADD:TO:PRINT:LINE CHAR:COUNT
                                                   30$:
                                                              CMPB
                                                                         #15,(R0)
                             000015
       999764
                  122710
 396
       000770
                  002006
                                                              BGE.
                                                                         44
 397
                                                                         R1
                                                              INC
       000772
                  005201
                                                                                               :PRINT.LINE.FULL:
:YES, WRITE.TO.TT0
:MOVE.CHAR.TO.PRINT.LINE
                                                              CMP
                                                                         #72.,R1
 399
       000774
                  022701
                             000110
                  002426
                                                              BLT.
                                                                         7$
       AA LAAA
 466
                                                                          (R0)+,(R5)+
                  112025
                                                              MOVB
      001002
 401
                                                                                                :GET · NEXT · CHAR ·
                                                                         3$
       001004
                                                              BR
 403
                                                                                                :ADD-FOR ANGLE-BRACKETS-
:ENOUGH-SPACE-ON-CURRENT-LINE
                                                              ADD
                                                                          #4.R1
      001006
                  062701
                             000004
 494
                                                                         #72..R1
                                                              CMP -
       001012
                  022701
 405
                                                                                                :NO, WRITE-CURRENT LINE:
:MOVE-LEFT BRACKET IN-ANY-CASE
:MOVE-ASCII 1 IN ANY-CASE
                                                                         7$
       001016
                  002417
                                                                          #°<,(R5)+
                             000074
 407
       991929
                   112725
                                                                         #11,(R5)+
#12,(R0)+
                  112725
                                                              MOVB
       001024
 408
                                                                                                :LINE · FEED ·
       001030
                   122720
                             000012
                                                               CMPB
                                                               BEQ.
                                                                                                :YES, BUILD ASCII STRING
                  001403
112725
 410 001034
                                                                          #15,(R5)+
                                                               MOVB
                             000065
 411 001036
                                                                                                :FINISH-WITH-RIGHT BRACKET
 412-001042
                                                              BR
                                                                         6$
                  200402
                                                              MOVB
                                                                          #:2,(R5)+
                  112725
112725
                             999962
 413 001044
                                                                                                :CLOSE BRACKETS
:GET NEXT CHAR
                                                               MOVB
                                                                          #:>,(R5)+
                             000076
 414 001050
 415
      001054
                  000732
                                                              BR
                                                                          3$
 416
                                                               WRITE ONE LINE TO THE CONSOLE
 417
 418
                                                               JSR-
                                                                                                ; WRITE · LINE · TO · TT0
       001056 004767 000000G·
```

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  420 001062- 005001
                                                                                                                                                                      :GLEAR · PRINT · LINE · CHAR · COUNT
 421 001064
                              312705
                                                 000000G
                                                                                                            MOV.
                                                                                                                                #PRINT, R5
                                                                                                                                                                     :RESET PRINT LINE POINTER
 422.001070
                              000724
                                                                                                                               3$
                                                                                                                                                                      :PRINT-NEXT-78 CHARS
 423
 424
 425
                                                                                                            BYTE · TRANSLATOR ·
 426
 427
 428
                                                                                                            CHECK: WHETHER: THE: TGH: GOMMAND: HAS: BEEN: USED: TO CREATE: A: BYTE: TRANSLATOR: OVERRIDE: TABLE: LIST: CANNOT: BE: DONE: OTHERWISE:
 429
430
 432-001072
                                                                                        LIBT::
 433
          001072
                              032767
                                                 000000G 000000G
                                                                                                            BIT.
                                                                                                                               #RIDE, BASE
                                                                                                                                                                     :HAS-BT-TABLE-BEEN OVERRIDEN
 434 001100
                              001003
                                                                                                            BNE
                                                                                                                                                                     YES, CONTINUE

**FOR BT, CHANGE COMMAND MUST PRECEED LIST*
                                                                                                                               1$
 435
          001102
                              004767
                                                 000000G
                                                                                                            ĴSR
                                                                                                                               PC.ERR22
 436
          001106
                              000442
                                                                                                            BR
                                                                                                                                                                     :EXIT-
 437
 438
                                                                                                           CHECK WHETHER THE START LIST ADDRESS IS IN RANGE. THE FIELD BY BIND CONTAINS THE WORD OFFSET WHICH IS THE START ADDRESS. WILL BE USED TO GET THE START ADDRESS.
 439
 440
 441
 442
 443 001110
                              026727
                                                 000000G 000000C 1$:
                                                                                                            CMP.
                                                                                                                              BINWD.#<BTEND-BTRANS> ; IS START ADDRESS IN RANGE
 444 001116
                             103403
004767
                                                                                                            BLO.
                                                                                                                                                                     YES, CONTINUE
START ADDRESS OUT OF RANGE HIGH
                                                                                                                              2$
 445 001120
                                                 000000G
                                                                                                                              PC, ERR20
                                                                                                            JSR
 446 001124
                             000433
                                                                                                                              LIIX
                                                                                                                                                                      :FXIT
 447
 448
                                                                                                           LIST-THE-OVERRIDE-TABLE.
 449
 450 001126
                              012702
                                                000000G
                                                                                                                              #BTOVER,R2
                                                                                                                                                                     :POINT TO BT OVERRIDE TABLE :LOAD WORD OFFSET: :SHIFT FOR BYTE OFFSET
                                                                                        2$:
                                                                                                           MOV.
451 001132
                             016703
                                                                                                           MOV:
                                                                                                                              BIHWD,R3
452.001136
                             006303
                                                                                                                              R3
                                                                                                           AS...
 453 001140
                             060302
                                                                                                                                                                     :START LIST HERE
 454
455
                                                                                                           USE-THE-LOOP FLAG-TO-CONTROL-PRINTING:
ANY-CHARACTER-ENTERED-FROM-THE-CONSOLE-TERMINATES-THE-COMMAND-AS-DOES-END-OF-DATA:
456
 457
 458
                                                 000000G.
459 001142·
460 001146
                                                                                                                              #PRINT.R5 ;POINT-TO-PRINT-LINE : #5.R3 ;COUNT-NUMBER-OF-WORDS-IN-PRINT-LINE : (COUNT-NUMBER-OF-WORDS-IN-PRINT-LINE : (COUNT-NUMBER-OF-WORD-FROM-BT OVERRIDE-TABLE : (CONVERT FOR-PRINTING : (CONVERT FOR-PRINT : (CONVERT FOR-PRINTING : (CONVERT FOR-PRINT : (CONVERT FOR-PRI
                             012705
                                                                                       3$:
                                                                                                           MOV.
                                                                                                                              #PRINT,R5
                             012703
                                                000005
461
                             012201
                                                                                       4生:
                                                                                                           MOV
                             004767
462-001154
                                                 000000G
                                                                                                           JSR
463 001160
                             929227
                                                 000000C
                                                                                                           CMP
464
         001164
                              103011
                                                                                                           BHIS
                                                                                                                              5$
                                                                                                                                                                    ;YES, EXIT:
;SUB-FROM-PRINT-LINE-COUNT:
465 001166
                             005303
                                                                                                           DEC
                                                                                                                              R3
466
         001170
                             001370
                                                                                                           BNF
                                                                                                                              4$
                                                                                                                                                                     CONVERT NEXT TABLE ENTRY
467
                             004767
032767
         001172
                                                000000G
                                                                                                           JSR
                                                                                                                              PC.CONSOL.
                                                                                                                                                                     :PRINT-LINE-
468 001176
                                                000000G · 000000G
                                                                                                           BIT
                                                                                                                              #LOOP, BASE
                                                                                                                                                                    ;LOOP.ON
;NO, EXIT.
469
         001204
                             001403
                                                                                                          BEO
                                                                                                                              LIAX
470 001206
                             000755
                                                                                                          BR
                                                                                                                                                                     :START-WITH-FRESH-LINE
471
472
         001210
                            004767
                                                000000G.
                                                                                       5$:
                                                                                                           JSR -
                                                                                                                              PC.CONSOL.
                                                                                                                                                                    :PRINT.LAST.LINE.
473
474
475 001214
                            004767
                                                имимиясь:
                                                                                                                              PC.KILL.
                                                                                                                                                                    :KILL-AST-(IF-THERE-WAS-ONE)
475 001220
                            000167
                                                000000G
                                                                                                           JMP
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TDATA -
            478
            479
            480
                                                                                                                                           END DATA
            481
            482
                                                                                                                                           CHANGE: THE NUMBER OF 6-BIT BYTE CHARACTERS TO BE TRANSFERRED TO THE TERM DETECTOR INPUT BUFFER. THE CONTENTS OF THE BUFFER REMAINED UNCHANGED.
            483
            484
            485
            486
                                                                                                                                           NB. SINCE-THE-LOCAL-INPUT-BUFFER IS-TRANSFERRED-TO-THE-TERM-DETECTOR-IN-16-BIT-WORDS-AND-THERE-ARE-8-6-BIT-BYTES-IN-3-16-BIT-WORDS, THE-NUMBER-OF-6-BIT-BYTES-IN-THE-LOCAL-DATA-BUFFER-SHOULD-BE-DIVISIBLE-BYTES-IN-ORD-SHOULD-BE-DIVISIBLE-BYTES-IN-ORD-SHOULD-BE-DIVISIBLE-BYTES-IN-ORD-SHOULD-BE-DIVISIBLE-BYTES-BOOKENDERS-BYTES-BOOKENDERS-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-BYTES-
            487
            488
            489
            490
            491
                                                                                                                                           BY 8. NO CHECKING IS DONE, HOWEVER:
            492
            493
            494 001224
                                                                                                                    EN1::
            495
                      001224
                                              004767
                                                                     000000G
                                                                                                                                           JSR
BCC
                                                                                                                                                                                                                :LOCATE - END - VALUE - IN-COMMAND - LINE - 19 4 10 17 17
                                                                                                                                                                 PC.FIND
            496
                       001230
                                               103003
                                                                                                                                                                                                                OK, CONTINUE
MISSING OPERAND:
                                                                                                                                                                  3$
            497
                       001232
                                              004767
                                                                     000000G
                                                                                                                                           JSR
                                                                                                                                                                  PC, ERR3
            498
                      881236
                                              000425
                                                                                                                                           BR
                                                                                                                                                                                                                :EXIT
            499
                      001240
                                              004767
                                                                                                                                                                                                                CONVERT COMMAND.LINE.VALUE.TO.BINARY
                                                                     000000G
                                                                                                                    3$:
                                                                                                                                           JSR
                                                                                                                                                                 PC.PACK
            500
                      001244
                                              103003
                                                                                                                                           BCC
                                                                                                                                                                  4$
                                                                                                                                                                                                                ; CONVERSION SUCCESSFUL
            501
                      001246
                                              004767
                                                                     000000G
                                                                                                                                           JSR.
                                                                                                                                                                 PC, ERR4
                                                                                                                                                                                                                : "INVALID - NUMERIC - VALUE "
            502-001252
                                              000417
                                                                                                                                                                 EH1X
            503
            504
                                                                                                                                           THE END VALUE CANNOT BE ZERO.
                                                                                                                    ;
            505
506
                      001254
                                              005767
                                                                     000000G
                                                                                                                    4$:
                                                                                                                                                                                                                ;IS-END-VALUE-ZERO
;NO, CONTINUE-
                                                                                                                                                                 BINWD.
            507
                       001260
                                              001003
                                                                                                                                           BHE
                                                                                                                                                                 5$
                      001262
                                              004767
                                                                     000000G
                                                                                                                                           JSR
                                                                                                                                                                 PC, ERR4
                                                                                                                                                                                                                ; REPORT · INVALID · VALUE ·
           509 001266
510
511
                                              000411
                                                                                                                                                                 EN1X
                                                                                                                                                                                                                :AND.EXIT
                                                                                                                                          THE 'DATA' COMMAND MUST HAVE BEEN PREVIOUSLY EXECUTED. IF IT HAS BEEN, REPLACE THE CONTENTS OF THE FIELD 'DATALN' (LENGTH OF LOCAL DATA BUFFER) WITH THE END VALUE FROM THE COMMAND LINE.
            512
            513
           514
515
            516
                      001270
                                              005767
                                                                     000000G
                                                                                                                    5$:
                                                                                                                                           TST
                                                                                                                                                                  DATALN
                                                                                                                                                                                                                ;HAS: 'DATA' COMMAND: BEEN: EXECUTED:
                      001274
                                              001003
                                                                                                                                                                 6$
PC,ERR10
                                                                                                                                          RNF
                                                                                                                                                                                                                :YES, CONTINUE
            518 001276
                                              004767
                                                                     000000G
                                                                                                                                           JSR
                                                                                                                                                                                                                ;DATA COMMAND MUST PRECEED LEND:
            519
                      881382
                                              000403
                                                                                                                                                                 EH1X
            520 001304
                                             016767
                                                                     000000G.000000G.6$:
                                                                                                                                           MOV.
                                                                                                                                                                 BINWD, DATALM
                                                                                                                                                                                                                REPLACE LENGTH OF 'DATA'
            521
           522-001312
                                                                                                                   ÉN1X:
            523 001312 000167
                                                                     000000G
                                                                                                                                           JMP
                                                                                                                                                                 COMXX
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TDATA
     526
527
                                                                    DATA · FILES · ROUTINES ·
     528
                                                                    READ-EITHER THE 'DATA' BUFFER OR THE BYTE TRANSLATOR
     529
                                                                    BUFFER FROM DISK.
PERFORM SECOND LEVEL PARSING
     531
532
                                                                    EG. IN THE COMMAND:
     533
     534
                                                                    PARSE THE . " IB!
     535
      536
     537
                                                         DF1::
     538 001316
539 001322
                       004767
                                  0000000
                                                                    JSR
                                                                               PC.FIND.
                                                                                                      :FIND-A-BUFFER-MNEMONIC-IN-COMMAND-LINE-
                      103004
                                                                    BCC.
                                                                                1$
                                                                                                      ;OK, CONTINUE
     540
          001324
                      994767
                                  000000G
                                                                    JSR
                                                                                PC,ERR3
                                                                                                      : 'MISSING OPERAND'
      541
          001330
                      000167
                                  000514
                                                                    JMP
     542
     543
                                                                    MATCH THE MINEMONIC FROM THE COMMAND LINE AGAINST THE
                                                         ż
     544
                                                                    TABLE OF VALID MNEMONICS.
     545
           001334
     546
                      012700
                                 000002
                                                         15:
                                                                    MOVE
                                                                               #DF1LN,R0
                                                                                                      :NUMBER:OF:TABLE:ENTRIES:
:TABLE:OF:RESPONSES/RTN:ADDRESSES
     547
          001340
                      012702
                                  0000201
                                                                    MOV
                                                                                #DF1TBL,R2
     548
          001344
                      004767
                                  000000G
                                                                    JSR.
                                                                               PC.SCAN.
                                                                                                      :CHECK - COMMAND - LINE - AGAINST - TABLE
     549 001350
                      103004
                                                                    BCC.
                                                                               2$
                                                                                                      :OK, CONTINUE.
     550
          001352
                      884767
                                  BBBBBBB
                                                                    JSR
                                                                               PC.ERR11
                                                                                                      ; 'INVALID FILE MNEMONIC'
     551 001356
                      000167
                                  000466
                                                                    JMP -
                                                                               DF4X
     552-001362-
                      000171
                                                         2$:
                                                                    JMP .
                                                                               @(R1)
                                                                                                      ; JUMP . TO ROUTINE .
     553
     554
     555
                                                                    LOAD 'DATA' BUFFER FROM DISK
                                                                   LOAD. DATA: BUFFER.FROM.DISK.
THIS.ROUTINE READS.A. DATA: FILE FROM.DISKONE.RECORD AT A.
TIME, IT. THEN.CALLS.A. SUBROUTINE IN. TMAIN. WHICH.PROCESSES.
THE.LINE.AND PLACES.IT INTO TWO BUFFERS, ONE OF THE BUFFERS.
IS SIMPLY.A.MIRROR.OF.THE.INPUT.LINE.INPUT TO BE. USED.FOR.
BUFFER.VERIFICATION; THE.OTHER.BUFFER.IS.THE.6-BIT.BYTE.
BUFFER.WHICH WILL.EVENTUALLY.BE.TRANSFERRED.TO.THE.
TERM.DETECTOR.INPUT.BUFFER.(SEE.THE.*TR: AND.*RU:
     556
     557
     559
     560
      561
     563
                                                                    COMMANDS).
     564
     565
                                                                    CLEAR · LOCAL · DATA · BUFFER · (BOTH · THE · 6-BIT · BYTE · TABLE
     566
                                                                    AND THE 8-BIT ASCII MIRROR TABLE).
     567
     568
          001366
                                                         ĎFIB::
     569 001366
                                                                                                     CLEAR BIT SHIFT COUNTER
CLEAR LENGTH OF "DATA"
POINT TO 6-BIT BYTE TABLE
+1.R1 NUMBER OF WORDS IN TABLE
CLEAR DATA TABLE
                      005067
                                 000000G
                                                                               COUNT:
     570 001372
                      005067
                                  000000G
                                                                    CLR
                                                                               DATALN:
     571 001376
                                 000000G-
                      012700
                                                                    MOV
                                                                               #DTBL,R0
     572.001402
                      012701
                                 001000
                                                                    MOV-
                                                                               #<<1364.*3>/8.>
     573 001406
574 001410
                      005020
                                                                                                                                          A. A. A.
                                                         1$:
                                                                    CLR
                                                                                (R0) +
                                                                                                                                                  100 (A)
                      005301
                                                                    DEC
                                                                               R1
                                                                                                      :POINT-TO-ASCIT MIRROR TABLE
     575
          001412
                      001375
                                                                    BNE
                                                                               1$
     576
     577
          001414
                      012700
                                 000000G ::
                                                                    MOM
                                                                               #DSAVE,R0
     578 001420
                      012701
                                 001252.
                                                                    MOV.
                                                                               #1364./2,R1
                                                                                                      : NUMBER - OF - WORDS
     579 001424
                      005020
                                                                               (RØ)+
                                                                    CLR
                                                                                                      :CLEAR - TABLE -
     580 001426
                      005301
     581 001430 -
                      003375
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                                        Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
    582 ·
583
                                                          OPEN.THE.FILE. DATA. TXT
    584
                                                                    #DTBL,R4
    585 001432
                   012704
                             000000G
                                                          MOV
                                                                                        ;R4 -> 6-BIT.BYTE.TABLE
         991436
    586
                   012705
                             000000G
                                                          MOV
                                                                    #DSAVE,R5
                                                                                        :R5 -> 8-BIT-ASCII MIRROR-TABLE
         001442
                                                                    #TXTFDB
                                                          OPEN$R
         001442
                   012700
                             000000G
                                                          MOV.
                                                                    #TXTFDB,R0
                                                          .IIF
JSR:
         001446
                   112760
                             000000G · 000000G
                                                                    NB,#FO.RD,
                                                                                       MOVB . #FO.RD, F. FACC(R0)
          001454
                   004767
                             000000G
                                                                    PC.OPEN
    588
         001460
                   103005
    589
         001462
                   004767
                             000000G
                                                           JSR
                                                                    PC.ERR12
                                                                                       :ERROR - ON - OPEN -
    590 001466
591 001472
                   005067
                             000000G
                                                          CLR
                                                                    DATALN:
                                                                                       :AS THOUGH RTN WAS NOT ENTERED
                   000566
                                                          BR
                                                                    DF4X
    593
                                                          READ ONE RECORD. CALL ROUTINE IN TMAIN TO ADD ONE
    594
                                                          RECORD'S WORTH OF DATA TO THE LOCAL TABLE.
     595
          001474
                                                          GET$
                                                                    #TXTFDB
                                                                                       :READ . DATA: FILE.
                   012700
          001474
                             000000G
                                                          MOV-
                                                                    #TXTFDB,R0
          001500
                   004767
                             000000G-
                                                           JSR.
                                                                    PC..GET
                                                                    5$ ;ERROR.OR.END.OF.FILE.
F.NRBD(R0),GCMLEN.;LENGTH.OF.LINE.READ.
         001504
                   103414
                                                          BCS
     598
         001506
                   016067
                             000000G - 000000G
                                                          MOV
    599
         001514
                   012701
                             000000G
                                                          MOV
                                                                    #GCMBUF.R1
                                                                                        :POINT-TO-LINE
     600
         001520
                   004767
                                                                                       ;BUILD:6-BIT:BYTE:TABLE
;ERROR:OR:END:OF:TABLE:
;ACCUMULATE:LENGTH
                             000000G
                                                           JSR
                                                                    PC.DBLD
                                                                    DFIX
          001524
                    103551
                                                          BCS
     602-001526
                   066767
                             000000G-000000G
                                                          ADD
                                                                    DPLUS, DATALN
     603
         001534
                   000757
                                                          BR
                                                                    4$
                                                                                        :GET-NEXT-LINE
     604
                                                                    #-10.,F.ERR(R0) :END.OF.FILE.
6$ :YES, PUT.OUT.MESSAGE.
     605
         001536
                    122760
                             177766 -000000G-5$:
                                                          CMPB
         001544
001546
                   001405
004767
     606
                                                          BEQ
                                                                                        #ERROR: ON: GET:
#AS: THOUGH: RTN: WAS NOT: ENTERED
     607
                             000000G
                                                                    PC.ERR13
                                                          JSR
          001552
                   005067
                             000000G
                                                          CLR
                                                                    DATALN:
     609
         001556
                   000402
                                                                                        :CLOSE · FILE · AND · EXIT ·
     610
611
         001560
                   004767
                                                                    PC, ENFILE
                                                           JSR
                             000000G
                                                 ń$:
     612-001564
                                                 7$:
                                                          CLOSE$
                                                                    #TXTFDB
          001564
                   012700
                             000000G
                                                          MOV.
                                                                    #TXTFDB,R0
          001570
                   004767
                             000000G
                                                           JSR
                                                                    PC..CLOSE
         001574
     613
                   000525
                                                          BR
                                                                    DF 1X
     614
     615
                                                          LOAD-BYTE-TRANSLATOR-BUFFER-FROM DISK, READ-THE-FILE-TRANSLATOR OVERRIDE-TABLE, THE-FILE-ON-DISK MUST-BE-A FULL-64
     616
     617
     618
     619
     628
     624
     622
         001576
                                                 DFBT::
                                                                                        ;POINT:TO:BYTE:TRANS:TABLE:
;NUMBER:OF:WORDS:
;CLEAR:TABLE:
     623
         001576
                    012700
                             000000G
                                                          MOV
                                                                    #BTOVER, RØ
     624 001602
625 001606
                   012701
                             000100
                                                          MOV:
                                                                    #64..R1
                                                          CLR
                                                                    (R0) +
                   005020
                                                 1$:
          001610
                   005301
                                                          DEC
                                                                    R1
    627
628
         001612-
                   003375
                                                                                                                 the Samuel Street, and the second
                                                          OPEN 'TRANS.TXT'
     630
    631 001614
                                                          OPEN$R · #TRFDB
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     001614
               012700
                         000000G
                                                       MOV
                                                                 #TREDB.RA
               112760
                         000000G · 000000G
     001620
                                                       .IIF
                                                                 NB, #FO.RD,
                                                                                    MOVB . #FO.RD . F . FACC(RA)
     001626
               004767
                         000000G
                                                       JSR.
                                                                 PC..OPEN
632 · 001632
               103003
                                                      BCC
                                                                 2$
633
    001634
               884767
                        000000G
                                                       JSR.
                                                                 PC, ERR14
                                                                                    :ERROR:ON:OPEN-
634
    001640
               000503
                                                       BR
                                                                 DF4X
635
636
637
                                                       TOP-OF-LOOP, READ-FILE.
     001642
              ð12702·
                        000000G
                                                       MOV
                                                                 #BTOVER,R2
                                             2$:
                                                                                    :R2.-> BYTE.TRANS TABLE
639
    001646
                                                       GET$
                                                                 #TRFDB
               012700
     001646
                         BBBBBBBB
                                                       MOV-
                                                                 #TRFDB,R0
     001652
               004767
                         аваявав
                                                       JSR
                                                                 PC. GET
640
     001656
               103021
                                                       BCC
                                                                 6$
                                                                                    :OK. PROCESS RECORD
641
    001660
               122768
                         177766
                                   000000G
                                                       CMPB
                                                                 #-10.,F.ERR(R0)
                                                                                    :END · OF · FILE ·
642
    .001666
               001403
                                                                20$
PC.ERR15
                                                       BEQ.
                                                                                    :YES, EXIT
643
    001670
               004767
                         000000G
                                                       JSR
                                                                                    :ERROR - ON - GET
644
    001674
               000447
                                                                 30$
                                                                                    :CLOSE · FILE
645
646
                                                       EXIT-ON-SUCCESSFUL-FILLING-OF-TABLE.
647
648 001676
               852767
                         000000G · 000000G · 20$:
                                                       BIS.
                                                                 #RIDE,BASE
                                                                                    ;SET-FLAG-FOR-OVERRIDE-TABLE FILLED-
649
     001704
               004767
                         BREEFER
                                                       JSR
                                                                PC, ENFILE
                                                                                    :PRINT END-OF-FILE MESSAGE
     001710
650
                                                       CLOSE$
                                                                 #TREDB -
     001710
001714
               012700
                         000000G
                                                                 #TRFDB,R0
                                                       MOV:
               004767
                         авававас
                                                       JSR
                                                                 PC..CLOSE
     001720
               000453
                                                                DF1X
                                                       BR
                                                                                    ;EXIT-
652
653
                                                      PROCESS: ONE: RECORD: EACH: RECORD: MAY: CONTAIN: SEVERAL: TABLE VALUES: SEPARATED: BY: BLANKS: IN: ORDER: TO: PARSE: THEM EASILY MAKING: USE: OF: EXISTING SUBROUTINES; THE: RECORDS: ARE: READ:
654
655
656
                                                       INTO THE COMMAND LINE BUFFER GCMBUF.
                                                                                                                                      #10 1 E (***)
657
     001722
               016067
                         000000G 000000G 6$:
                                                                F.NRBD(R0).GCMLEN::PRETEND:DISK:RECORD:IS:A:COMMAND:LINE:#GCMBUF.R1::POINT:TO:RECORD:READ:POINT:TO:RECORD:READ::COCATE:A:TABLE:VALUE:
                                                       MOV
659
     001730
               012701
                         000000G
                                                       MOV
660 001734
               884767
                         000000G
                                                       JSR
661 001740
               103003
                                                      BCC
                                                                 7$
                                                                                    :OK, CONTINUE
     001742
               004767
                         000000G
662
                                                                 PC.ERR16
                                                       JSR.
                                                                                    : EMPTY · INPUT · L INE
663
     001746
               000422
                                                      BR
                                                                 30$
                                                                                    :CLOSE FILE AND EXIT
664
665 001750
               004767
                         000000G
                                             7$:
                                                       JSR
                                                                 PC*PACK
                                                                                    :CONVERT NUMERIC VALUE FROM DISK RECORD
    001754
666
               103003
                                                                                    OK, CONTINUE:
                                                      BCC
                                                                8$
     001756
                                                       JSR
667
               004767
                         000000G
                                                                 PC, ERR4
668 001762
               000414
                                                                                    :CLOSE FILE AND EXIT
                                                                 30$
669
670 001764
               929227
                         имимияс.
                                                       OMP
                                                                 R2.#BTOVER+<BTEND-BTRANS> ; END OF TABLE REACHED
                                             84:
671 001770
               103403
                                                       BLO
                                                                 105
                                                                                    :NO, CONTINUE
    .001772
               004767
                                                       JSR
                                                                 PC.ERR17
                                                                                    :TABLE · OVERFLOW
:CLOSE · FILE · AND · EXIT
673 001776
               000406
                                                       BR
                                                                 30$
                         ARRAGAG.
                                                                                    #ENTER WORD IN BT TABLE 
#LOCATE NEXT TABLE VALUE 
#PROCESS STRING
674 002000
               016722
                                             10$:
                                                       MOV
                                                                BINWD, (R2)+
675
     002004
               004767
                         000000G
                                                       JSR -
                                                                PC.FIND.
676 002010
677 002012
               193357
                                                       BCC
     002012
              000715
                                                       BR
                                                                 3$
                                                                                    : NOTHING THERE. FINISHED WITH THAT RECORD.
678
679
                                                       EXIT-ON-ERROR: CLEAR-OVERRIDE-TABLE-AND-FLAG:
688
681 002014
                                    30$: CLOSE$ #TRFDB Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
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	002014 002020	012700 004767	0000000G. 0000000G.		MOV∙ JSR∙	#TRFDB.R0 PCCLOSE	
682		00 0.		;			•
683 684 685 686	002024 002032 002036 002042	042767 012700 012701 005020	000000G - 000000G - 000000G - 000400	35⊈:	BIC: MOV: MOV: CLR:	#RIDE,BASE #BTOVER.R0 #256R1 (R0)+	CLEAR BT OVERRIDE FLAG POINT TO OVERRIDE TABLE NUMBER OF WORDS IN TABLE
687 688	002044	005301 001375		204.	DEC : BNE :	(R0)∓ R1 35\$;CLEAR·TABLE·
689 690 691	002050			DF1X:			
	.002050	000167	000000G ·		JMP.	COMXX:	

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TDATA.
                                                   Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3
      694
      695
      696
                                                                           TRANSFER.
                                                                          MOVE LOCAL DATA TABLE TO TERM DETECTOR INPUT BUFFER OR BYTE TRANSLATOR OVERRIDE TABLE TO TERM DETECTOR
      697
      698
                                                                          BYTE TRANSLATOR.
      699
                                                                          PERFORM SECOND LEVEL PARSING EG. IN THE COMMAND:
      788
      701
      702
      703
                                                                          PARSE THE ' IB'
      794
      705
      706
            002054
                                                              TR1::
      707
            002054
                        004767
                                     000000G
                                                                           JSR.
                                                                                      PC.FIND.
                                                                                                                :FIND THE BUFFER MHEMONIC IN COMMAND LINE
                                                                          BCC
      708
            002060
                                                                                                                :OK, CONTINUE:
:'MISSING OPERAND'
                        103003
                                                                                       15
                                                                           JSR
      709
            002062
                        004767
                                     000000G
                                                                                       PC,ERR3
      710 002066
711
                        000532
      712
713
714
                                                                          \label{eq:match} {\sf MATCH} \cdot {\sf THE} \cdot {\sf MNEMONIC} \cdot {\sf IN} \cdot {\sf THE} \cdot {\sf COMMAND} \cdot {\sf LINE} \cdot {\sf AGAINST} \cdot {\sf THE} \cdot {\sf TABLE} \cdot {\sf OF} \cdot {\sf VALID} \cdot {\sf MNEMONICS} :
      715 002070
716 002074
                                                                                                                :NUMBER.OF.TABLE.ENTRIES.
:TALE.OF RESPONSES/RTN ADDRESSES
:MATCH.COMMAND.LINE.AGAINST.TABLE...
                        012700
                                     999992
                                                              15:
                                                                          MOV.
                                                                                       #TR1LH,R0
                         012702
                                     000030'
                                                                          MOV
                                                                                       #TRITBL,R2
      717 002100
718 002104
719 002106
                         004767
                                     000000G
                                                                           JSR
                                                                                       PC.SCAN
                         103003
                                                                           BCC
                                                                                       2$
                                                                                                                OK, CONTINUE
                         004767
                                     000000G
                                                                           JSR
                                                                                       PC.ERR18
                                                                                                                ; INVALID TABLE NAME:
      720 002112-
                        000520
                                                                           BR
                                                                                       TR1X
      721
                                                                           SAVE THE POINTER TO THE ROUTINE ASSOCIATED WITH THE
                                                                          BUFFER, R1 -> ROUTINE ADDRESS,
CALL A ROUTINE TO SCAN THE COMMAND LINE FOR A LOOP
       723
      724
                                                                           INDICATOR: EG:
       725
                                                                           >TR · IB · L
       727
                                                                           LOOP.FLAG.WILL.BE.SET.IF.INDICATOR.IS.PRESENT.
       728
                                                                                                               ;SAVE-POINTER-TO-ROUTINE
;LOOP-ON TRANSFER
;POINT-TO-RTN
;JUMP-TO ROUTINE
       729
            002114
                         010167
                                     000000G
                                                                                       R1.RTNPT
                                                              2$:
       730
            002120
                         004767
                                     000000G
                                                                           JSR-
                                                                                       PC,LOOPR
       731 002124
                         016701
                                     000000G
                                                              TRIN:
                                                                          MOV-
                                                                                       RTHPT,R1
       732
            002130
                         000171
                                     000000
                                                                           JMP
                                                                                       @(R1)
       734
                                                                          TRANSFER-FROM LOCAL DATA BUFFER TO TERM DETECTOR INPUT BUFFER, THE FIELD DATALN CONTAINS THE NUMBER OF 6-BIT BYTE CHARACTERS IN THE LOCAL BUFFER, CONVERT THIS VALUE INTO A NUMBER PDP 11 WORDS FOR CONTROLLING
       735
       736
       737
       738
                                                                           THE TRANSFER.
       740
       741
       742-002134
                                                              TRIB::
            002134
                         012767
                                                  176376
                                                                           MOV
                                                                                       #0.TD$SW
                                                                                                                :RESET-TD-
                                                                                                                SIMULATE DISK INPUT
NUMBER OF 6-BIT BYTES
MULT BY 2
      744 002142
745 002150
                         012767
                                     000200
                                                  176360
                                                                           MOV
                                                                                       #T$DISK,TD$CTW
                                     000000G
                         016701
                                                                           MOV.
                                                                                       DATALH,R1
            002154
                                                                                       ŘĨ
      746
                         006301
                                                                           ASL
                                                                                                               :NULTER 2:
:NUMBER :OF :6-BIT :BYTES :
:RESULT = NUMBER : OF :BYTES : X :3
:NOW DIVIDE :BY :B.
:FOR :NUMBER :
       747
            002156
                         016702
                                     000000G
                                                                           MOV
                                                                                       DATALH,R2
      748 002162
749 002164
                         060201
                                                                           ADD:
                                                                                       R2,R1
                                                                                       R1
                         006201
                                                                           ASR
      750 002166
                                                   ASR R1 FOR NUMBER Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
                                                                           ASR
                         006201
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MACRO M1110 27-MAR-80 15:36 PAGE 10-1
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TDATA.
     751 002170
                    006201
                                                                                             ; IB START ADDRESS
                              000000G-000000G
                                                              MOV.
                                                                         ILOW, MSTR2
                    016767
     753
754
         002200
                    012702
                              000000G
                                                              MOV:
                                                                        #DTBL,R2
                                                                                             :R2.-> 6-BIT.BYTE.TABLE
     755
                                                              TRANSFER THE TABLE
     756
     757
758
759
                                                                                             :POINT TO: IB
         882284
                    016703
                               000000G
                                                    1$:
                                                              MOV
                                                                        MSTR2,R3
         002204
002210
002212
                    012213
                                                              MOV
                                                                         (R2) + . (R3)
                                                                                             :LOAD - IB
    002212
760 002220
761 002222
762 00222
                                                                         #2,MSTR2
                               000002
                                                              ADD
                                                                                             :ADVANCE ADDRESS
                    005301
                                                              DEC
                                                                        R1
                    003370
                                                              BGT.
                                                                         1$
                                                                         TRLP
                                                                                             ;TEST-LOOP-FLAG
                    000447
     763
     764
765
                                                              TRANSFER - BYTE - TRANSLATOR - TABLE - TO - TD -
     766
767
                                                              IF A BYTE TRANSLATOR OVERRIDE TABLE HAS BEEN BUILT (SEE THE 'CH' AND 'DF' COMMANDS). THEN TRANSFER IT.

TO THE TERM DETECTOR. OTHERWISE TRANSFER THE DEFAULT
     768
     769
     770
                                                              BYTE-TRANSLATOR-TABLE. IN-EITHER CASE-TRANSFER-THE
     772
773
                                                              SAME TABLE FOUR TIMES:
     774 002226
                                                    TRBT::
     775
          002226
                     012767
                                                                         #0.TD$SW
                               000000
                                                              MOV
                                                                                             ; RESET: TD
     776
          002234
                     012702
                               000004
                                                              MOV
                                                                         #4,R2
                                                                                             :TRANSFER - SAME - TABLE - 4 TIMES
                     016767
012700
                                                                                             ;LOAD START ADDRESS:
;NUMBER:OF:WORDS:IN:TABLE
;IS:OVERRIDE:TABLE IN:USE
     777
778
          002240
                               000000G · 000000G
                                                              MOV
                                                                         TLOW, MSTR2
          002246
                                                              MOV
                               000100
                                                                         #64..R0
          002252
                     032767
                               000000G · 000000G
                                                              BIT
                                                                         #RIDE,BASE
     780
          002260
                     001403
                                                              BEQ
                                                                                             :N0
     781 002262
782 002266
                     012701
                               000000G
                                                              MOV
                                                                         #BTOVER,R1
                                                                                             ;POINT TO OVERRIDE TABLE
                     000402
                                                              BR
                                                                         3$
                                                                         #BTRANS.R1
                               000000G
                                                              MOV
                                                                                             :R1 -> BYTE-TRANS TABLE-
:SET-INTERFACE-AND CONTROL
:SELECT-BYTE-TRANS MAR-
          002270
                     012701
     783
                                                                        #T$ICD,TD$CTW.
#T$BTAR,TD$TAW
          002274
                     012767
     784
                               000040
                                         176360
                                                    3$:
                                                              MOV.
     785
          002302
                     012767
                               000030
                                          176362
                                                              MOV
      786
          002310
                     016767
                               000000G-176364
                                                              MOV
                                                                         MSTR2, TD$TDW
                     012767
012167
     787
          002316
                               000020 176362
                                                              MOV
                                                                         #T$BT,TD$TAW
                                                                                              :SELECT.BYTE.TRANS MEMORY
     788
          002324
                               176364
                                                              MOV
                                                                        (R1)+,TD$TDW
MSTR2
          002330
                                                              INC
DEC
                               000000G
                                                                                             ; ADVANCE ADDRESS
     790
791
          002334
002336
002340
                     005300
                                                                         RØ
                                                              BGT
                     003361
                                                                         4$
                     005302
                                                                         R2
                                                                                             ;SUB FROM OUTER LOOP COUNT
                                                              DEC
      793
          002342
      794
      795
          002344
          002344
                               000000G · 000000G
                                                              BIT
                                                                         #LOOP, BASE
                                                                                             :LOOP ON TRANSFER
      797
          002352
                     001264
                                                                         TRIN
                                                                                              :YES, REPEAT
                                                              BNE
      798
      799
          002354
                                                    TR1X:
     900
          002354
                     004767
                               000000G
                                                                         PC.KILL
                                                                                             :KILL AN AST (IF THERE WAS ONE)
     801 002360
                     000167
                               000000G
                                                               JMP
                                                                         COMXX
     802
     803
                     000001
                                                               .END
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APPRICE TO BE WELL A

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TDATA MORD M1110 27-MAR-80 15:36 PAGE 18-2
SYMBOL TA Approved For Release 2005/07/12 IA-RDP85-00514R000200020007-3
ALUCKE = · 040000
                                  BYTE38= 000046
                                                                    BYTE9 = 000011
                                                                                                      EN1X-
                                                                                                                                   002 · N ·
                                                                                                                                                 = 000144
BYTE39= 000047
BYTE4 = 000004
                                                                    BYTE90=-000132
BYTE91=-000133
                                                                                                      ERR10 = ******** GX*
ERR11 = ****** GX*
ERR12 = ******* GX*
                                                                                                                                        OFFSET= · *****
                                                                                                                                        OFF6 = · ********
PACK = · ********
                                  BYTE40= 000050
                                                                    BYTE92=-000134
                                                                                                                                                              GX
                                  BYTE41= 000051
BYTE42= 000052
BINUD . = . ******* CX.
                                                                    BYTE93=-000135
                                                                                                      ERR13 = · ****** GX
                                                                                                                                        PAR$$$=:000027
BITVAL=:000000
                                                                                                                                        PLB· = 000010
PLC· = 000020
PLD· = 000030
                                                                    BYTE94= 000136
                                                                                                      ERR14 = · жижжжжж GX ·
BIT0 = 0000001
BIT1 = 000002
                                  BYTE43=-000053
                                                                    BYTE95= 000137
                                                                                                      ERR15 = ******* GX
                                                                                                      ERR16 = ********* GX**
ERR17 = ******* GX**
                                  BYTE44= · 000054
                                                                    BYTE96= 000140
BIT10 = 002000
BIT11 = 004000
                                  BYTE45= 000055
BYTE46= 000056
                                                                                                                                        PLRWR - = - 000200
                                                                    BYTE97= 000141
                                                                                                      ERRI8 = ****** GX
                                                                                                                                        PLR:EN= 000200
PRINT = ******* GX ****
QR$CR1= 176420
                                                                    BYTE98=:000142
BIT12 -- 010000
                                  BYTE47= 000057
                                                                    BYTE99= 000143
                                                                                                      ERR20 = ******* GX
BIT13 = 020000
BIT14 = 040000
                                  BYTE48= 000060
BYTE49= 000061
                                                                    BYTVAL = . 000144
                                                                                                      ERR22 - - ******** GX
                                                                    CBKALL = 001000
                                                                                                      ERR3 = · ****** GX ·
                                                                                                                                        QR$CR2= 176422
                                                                                                                                        QR$LBR = 176424
Q$ATTN = 000100
Q$BCL = 000001
Q$CCCP = 000040
BIT15 = 100000
                                  BYTE5 = 000005
                                                                    CBKCLK = 000400
                                                                                                              = · ******* GX
                                                                                                      FRR4
BIT2 - - 000004
                                  BYTE50= 0000062
                                                                    CHBT.
                                                                               000376RG
                                                                                                 002 · ERR6
                                                                                                               = ******** GX
        = · 000010
= · 000020
                                  BYTE51=-000063
BYTE52=-000064
                                                                    CHIB.
                                                                               000260RG
                                                                                                002 ERR7
                                                                                                               = · жжжжжж GX
                                                                    CHLEN = ****** GX
BIT4
                                                                                                      FPPS
                                                                                                               = - жыжжык GX-
        = 000040
                                  BYTE53= 000065
                                                                               000150RG
                                                                                                               = жжжжжж БХ
BIT5
                                                                    CH1
                                                                                                002 · ERR9
                                                                                                                                        Q$CHB - = -000400
Q$CHRL = -000200
                                  BYTE54= 000066
                                                                    CH1LN - - 000002 - G
                                                                                                               = ************ GX
                                                                                                      FIND.
                                                                                                002 · FO · RD · = · ******** GX · GX · GX · ERR · = · ******* GX
        = 000200
BIT7
                                  BYTE55=-000067
BYTE56=-000070
                                                                    CHITBL 000000RG
                                                                                                                                        Q$CLR - = . 000040
        = 000400
BITS
                                                                                                                                        Q$CNC -- 030000
Q$CP -- 000060
                                                                    CH1X-
                                                                               000546R ·
BIT9 = 001000
BTEND = ******* GX
                                  BYTE57 = . 000071
                                                                    CNOBRE = 100000
                                                                                                      F.FACC= ****** GX
                                  BYTE58= 000072
BYTE59= 000073
                                                                    COMXX -= - ******* GX
                                                                                                      F.NRBD = · ******* GX
                                                                                                                                        Q$CPCC= 000010
BTOVER = · ****** GX ·
                                                                    CONSOL = · ****** GX · COUNT · = · ****** GX ·
                                                                                                      GCMBUF = · ******* GX
                                                                                                                                        Q$CP2 - 000260
Q$CSC - 01000
BTRANS= · ******** GX ·
                                  BYTE6 = 000006
                                                                                                      GCMLEN= ****** GX
BYTE0 = 000000
BYTE1 = 000001
                                  BYTE60=-000074
                                                                    CPCCEN= 010000
                                                                                                      GCONLY= ******* GX
                                                                                                                                        Q$CSEL = . 000360
                                                                                                      GCONET -- ******* GX*
HANG -- ******* GX*
ILOW -- ******* GX*
KILL -- ******* GX*
LIBT -- ##1072RG-
                                                                                                                                        Q$CSET= 000002
Q$CSP = 020000
Q$DMA = 000001
                                  BYTE61=-000075
                                                                    CPREAD = . 040000
CPWRTE = . 020000
                                  BYTE62=-000076
BYTE10= .000012
BYTE11= 000013
                                  BYTE63= 000077
                                                                    CSADRD = . 000004
BYTE12= 000014
BYTE13= 000015
                                  BYTE64= 000100
BYTE65= 000101
                                                                    CSEQCI=-100000
                                                                                                                                   002 · Q$ENBK = · 040000
                                                                    CSOE - 000040
                                                                                                      LIIB.
                                                                                                                 000672RG
                                                                                                                                   002 · Q$ENOP = · 020000
                                  BYTE66=-000102
                                                                                                                                  002 0$FAL = 004000 ...

0$FC = 000045

002 0$FO = 000044

002 0$FP = 000044
BYTE14= 0000016
                                                                    CSWRTE = - 000100
                                                                                                      LII
                                                                                                                 000552RG
BYTE15= 000017
                                  BYTE67 = . 000103
                                                                    DATA:
                                                                              000114R
                                                                                                002.LI1LN. = . 000002.G
BYTE16=:000020
BYTE17=:000021
BYTE18=:000022:
                                  BYTE68=-000104
                                                                    DATALN= ****** GX
                                                                                                      LIITBL : 000010RG
                                                                                                002 LIIX 001214
002 LOC.EN= 000100
LOC.WA= 040000
                                  BYTE69= 000105
BYTE7 = 000007
                                                                    DA1
                                                                               000040RG
                                                                                                                 001214R
                                                                    DAIX.
                                                                            000144R·
= · ****** GX·
                                                                                                                                        Q$HBF - 000002 '
BYTE19= 000023
                                  BYTE70= 000106
                                                                    DBLD.
                                                                                                                                        0$ICP -- 999996
BYTE2 - - 000002
BYTE20 - 000024
                                  BYTE71= 000107
BYTE72= 000110
                                                                    DBR.RD=-000001
                                                                                                      LOC.WB= 100000
                                                                                                                                        Q$IHB = 000003
                                                                                                      LOOP: = ********* GX:
                                                                    DB$CPP=-001457
DB$SPT=-000026
                                                                                                                                        Q$IHRL= 000002
BYTE21 = 0000025
                                  BYTE73= 000111
                                                                                                                                        Q$IMRP=.000007
Q$LBD.=.001000 ;
 BYTE22= 000026
                                  BYTE74= 000112
                                                                    DB$TPC=-000023
                                                                                                      MAREN1 = 000001
BYTE23=:000027
                                  BYTE75= 000113
                                                                    DEBT:
                                                                               001576RG
                                                                                                 002 · MAREN2 = · 004000
                                                                                                                                        Q$LBDP= 001001
                                                                    DF IB
BYTE24=:000030
                                  BYTE76= 000114
                                                                                                 002 · MARLOD = · 010000
002 · MAROUT = · 000002
                                                                                                                                        Q$LBP = 000001
                                                                                001366RG
 BYTE25= 000031
                                  BYTE77= 000115
                                                                    DF1
                                                                                                                                        Q$LDCD=.000003
                                                                                001316RG
                                                                    DF1LN = 000002 G
DF1TBL 000020RG
BYTE26= 000032
                                  BYTE78=-000116
                                                                                                      MAR.LO= 002000
                                                                                                                                         Q$LDMD= 000004
BYTE27=:000033
                                                                                                 002 MAR.OU= 000040
002 MBKALL= 001000
MBKCLK= 000400
                                  BYTE79= .000117
                                                                                                                                        Q$LDPP= 002000
                                                                                                                                        U$LHP = 010000

U$LHP = 010000

U$MNC = 140000

U$MR = 000052

U$MRP = 000040
                                  BYTE8 = .000010
                                                                    DF1X
BYTE28=:000034
                                                                               002050R
                                                                    DISPGS= 100000
BYTE29= 0000035
                                  BYTE80= .000120
 BYTE3 = 0000003
                                  BYTE81= 000121
                                                                    DMAAWR = . 000005
                                                                                                      MMADRD = . 000100
                                                                                                      MMLEFT= 000002
MMOE = 000004
MMURTE= 000010
                                  BYTE02= 000122
BYTE30= 000036
                                                                     DMARRD = - 000003
BYTE31 = - 000037
                                                                    DMARUR = - 000004
                                                                                                                                        Q$MRP2=_600240
Q$MSC = 040000
Q$MSET= 000004
                                  BYTE83 = . 000123
BYTE32= 000040
                                  BYTE84= 000124
                                                                     DPLUS -- ******** GX-
BYTE33= 000041
                                  BYTE85 = . 000125
                                                                     DSAVE - = - ********** GX
                                                                                                       MNOBRE = 100000
BYTE34= . 000042
                                                                    DTBL· = · ******** GX
ENBR· = · 010000
                                                                                                      MREN1 = 000001
MREN2 = 020000
                                  BYTE86= 000126
                                                                                                                                         Q$MSP - = - 100000
                                                                                                                                         Q$NCLK= 176000
Q$PP = 000100
                                  BYTE87=-000127
BYTE35= 000043
                                                                    ENFILE= ******** GX*
EN! 001224RG
                                                                                                 MSTR2:=: ******* GX: 002: MSYN =: 000040
BYTE36= 000044
                                  BYTE88= 000130
BYTE37 = . 000045
                                  BYTE89= 000131
                                                                                                                                         Q$PPSW= 000320
                                               Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
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MACRO-M1110 27-MAR-80 15:36 PAGE-10-3
SYMBOL . TABLE
                                                     Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
                                                                                                                                                          WORD69 = 000212

WORD7 = 000016

WORD70 = 000214

WORD71 = 000216

WORD72 = 000220

WORD73 = 000220

WORD74 = 000220

WORD75 = 000220

WORD75 = 000220
                                      TD$TDW= · 176364
                                                                             T$RBD0 = . 000200
                                                                                                                    WORD32=-000100
Q$QHLT= 000013
Q$QL = 000043
                                                                       T$RNB = 000040
002 T$RSET= 040000
T$SC = 000022
                                       TLOW.
                                                                                                                    WORD33=-000102
                                       TRBT -
                                                   002226RG
                                                                                                                    WORD34= 000104
Q$QLA -= - 000053
                                       TREDB - =
                                                   · жжжжжж GX
                                                                                                                    MORD35 = . 000106
Q$QLB - = 000054
                                                   002134RG
                                                                       002 · T$SCLK = · 020000
                                                                                                                    WORD36=-000110
Q$QLR - = 000001
Q$QU - = 000042
                                       TRIN
                                                   002124R
                                                                       002 · T$SEG1 = · 000000
002 · T$SEG2 = · 000001
                                                                                                                    WORD37=-000112
                                       TRI P
                                                   002344R
                                                                                                                    WORD38= 000114
Q$RDCD=-000005
                                                                       002 · T$SEG3 = · 000002
                                       TR1
                                                   002054RG
                                                                                                                    WORD39= 000116
Q$RDMD= 000006
                                                                             T$SO - - 000001
                                                                                                                    WORD4 = 000010
                                       TR1LH - = - 0000002 - G
Q$REBK = . 001000
Q$RNC - = . 006000
Q$RSC - = . 004000
                                                                      002 · T$UBUS = · 100000
002 · T$1CLK = · 000400
                                       TRITBL 000030RG
                                                                                                                    WORD40=.000120
                                                                                                                                                           WORD77= 000232
                                                                                                                    WORD41=-000122-
WORD42=-000124
                                                   002354R
                                       TR4X-
                                                                                                                                                          WORD78= 000234 == ≠
                                       TXTFDB= ****** GX*
T$AD * = *000020
                                                                             T$8BEN= 000020
                                                                                                                                                          WORD79= 000236
WORD8 = 000020
Q$RSET=-000010
Q$SM- =-100000
Q$SP- =-000120
                                                                             UBD.IN= 000020
                                                                                                                    WORD43= 000126
                                       T$BA = .000020
T$BA = .000002
T$BD = .000010
T$BSO = .100000
T$BT = .000020
                                                                             UNPK - = - жжжжжж GX-
                                                                                                                    WORD44=-000130
                                                                                                                                                           WORD80= 000240
                                                                             WORD0 = 000000
WORD1 = 000002
                                                                                                                                                          WORD81 = 000242
WORD82 = 000244
                                                                                                                    WORD45=-000132
Q$SP2 · = · 000340
                                                                                                                    WORD46= 000134
WORD47= 000136
RGQ.EN= 000200
                                                                             WORD10= 0000024
                                                                                                                                                          MORD83=:000246
RGQ.VA= 020000
RIDE = *******
                                       T$BTAR = . 000030
                                                                             WORD11= 000026
                                                                                                                    WORD48= 000140
                                                                                                                                                           WORD84= 000250 37
                                       T$BTD = 002000
T$CD = 000100
T$CLK = 002000
                                                                             WORD12=-000030
WORD13=-000032
                                                                                                                    WORD49= 000142
WORD5 = 000012
                                                                                                                                                          WORD85= 000252
WORD86= 000254
WORD87= 000256
RIDE = · ******* GX
RTNPT = · ******** GX
                                                                             WORD14= 000034
WORD50= 000144
                                       T$DISK=.0002000
T$DRD.=.0000004
5EQ.CI=-000010
                                                                             WORD15=-000036
                                                                                                                    WORD51 = 000146
                                                                                                                                                          WORD88 = . 000260
$$CLR·=·000000
$$LA·=·000001
$$OB·=·000005
                                                                             WORD16= 000040
                                                                                                                    WORD52= 000150
                                                                                                                                                           WORD89= 000262
                                       T$EMEM= 010000
T$FSAA= 000000
                                                                             WORD17=-000042
                                                                                                                    WORD53=-000152
                                                                                                                                                           WORD9 = 0000022
                                                                             WORD18= 000044
WORD19= 000046
                                                                                                                    WORD54=-000154
WORD55=-000156
                                                                                                                                                          WORD90=-000264
WORD91=-000266
WORD92=-000270
S$QR · = · 000006
                                       T$FSAB= 0000004
S$QX· = 000004
S$SR· = 000007
S$SI = 000010
                                       T$FSAC= 000014
                                                                             WORD2 - - 000004
                                                                                                                    WORD56= 000160
                                       T$FSB2=-000010
T$IB- =-000026
                                                                             WORD20=-000050
WORD21=-000052
WORD22=-000054
                                                                                                                    WORD57= 000162
                                                                                                                                                           WORD93 = . 000272
                                                                                                                    WORD58=-000164
WORD59=-000166
WORD6 =-000014
                                                                                                                                                           WORD94= 000274
        = 000014
                                       T$IBAR= 000024
                                                                                                                                                           UORD95= : 000276
                                       T$IBE - = -020000
T$IBF - = -040000
T$ICD - = -000040
TD$CTR= · 176370
TD$CTW= · 176360
                                                                             WORD23= 000056
                                                                                                                                                           WORD96= 000300
                                                                                                                    WORD60= 000170
WORD61= 000172
WORD62= 000174
                                                                             WORD24= 000060
WORD25= 000062
                                                                                                                                                           WORD97=-000302
TD$IHL=:004000
                                                                                                                                                          WORD98 = 000304
WORD99 = 000306
 TD$MEM=:000270
                                       T$MODE = . 004000
                                                                              WORD26= 000064
TD$OAR= 176344
TD$OTR= 176346
                                       T$0B: =:000036
T$0BE:=:004000
T$0BF:=:010000
                                                                             WORD27= 0000066
                                                                                                                    WORD63=-000176
                                                                                                                                                           WRDVAL = . 000310
                                                                                                                                                           XTREAD= 001000
XTWRTE= 000400
.CLOSE= *******
                                                                             WORD28 = . 000070
                                                                                                                    WORD64--000200
WORD65--000202
 TD$QRD= 000274
                                                                             WORD29= 000072
                                       T$0BRA=-000034
T$0BWA=-000032
T$0UTA=-100000
                                                                             WORD3 = 000006
 TD$SW·=·176376
                                                                                                                    WORD66= 000204
                                                                                                                    WORD67=-000206
WORD68=-000210
TD$TAR= 176372
                                                                             WORD30= 000074
WORD31= 000076
 TD$TAW= 176362
                                                                                                                                                            .OPEN = ****** G
 . ABS:
             ививия
                               aaa
                               001
             природа
 TDATA -
                               002
ERRORS DETECTEL:
                             0
VIRTUAL MEMORY USED: 4
DYNAMIC MEMORY: 5972 W
ELAPSED TIME: 00:01:01
                                   4595 WORDS
                                                       ( 18 PAGES)
                           ה אוט פעאט שטאט ניזס ( 10 ה
5972 WORDS ( 22 PAGES)
```

IDATA, TDATA/-SP=C20, 13IM, C20, 13TDATA

1777 TO 1775 TO

```
MACRO : N: 110 27-MAR-80 15:40 PAGE : Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
                                                                                                                            .FITLE . FRUN
                                                                                                                            .PSECT: TRUM
       000000
  23456789
                                                                                                                            .LIST MEB
                                                                                                                                                                                                          TERM DETECTOR 'MANUAL' DEBUGGING AIDS
                                                                                                                           RUN COMMANDS
                                                                                                                            COMMANDS:
                                                                                                                                                  RUN TERM DETECTOR :
11
12
                                                                                                                           ONCE A COMMAND HAS BEEN EXECUTED (OR AN ERROR ENCOUNTERED) THIS MODULE RETURNS CONTROL TO THE MODULE TMAIN, AT LOCATION
13
                                                                                                                             "COMXX".
14
15
16
         000000
                                                                                                     RU1TBL::
                                                                                                                             .ASCII-
                                                                                                                                                                                                ;SINGLE · CLOCK
18
19
        000000
000002
                                        123
                                                                103
                                                                                                                                                   7SC7
                                                                                                                             .WORD.
                                                                                                                                                  RUSC
                                0000707
         000004
                                         121
                                                                                                                             .ASCII
                                                                                                                                                   /QP/
                                                                                                                                                                                                 ;READ OUTPUT TO QR AND PRINT
                                                                120
                                                                                                                                                  RUQP
2i
22
                                000124°
        000006
000010
                                                                                                                             . MORD:
                                                                                                                             .ASCII.
                                                                                                                                                   ZQNZ
                                                                                                                                                                                                 :READ-OUTPUT-TO-QR (NO-PRINT)
                                                                116
                                                                                                                             .WORD
.ASCII
245678981
2222233334
         000012
                                9001341
                                                                                                                                                  RUQH
                                                                                                                                                                                                 :NORMAL CONTINUOUS CLOCK
        000014
000016
                                                                103
                                                                                                                                                   ZNCZ
                                        116
                                000144
                                                                                                                             .WORD
                                                                                                                                                   RUNC
                                                                                                     RU1LH-
                                                                                                                                                   <.-RU1TBL>/4
                                                                                                                                                                                                   ING.
                                                                                                                                                                                                                        35
          000020
                                                                                                      RU1::
 36
37
38
39
                                                                                                                                                                                                 ;FIND AN OPERAND IN COMMAND LINE ;OK, CONTINUE
                                                                                                                            JSR
BCC
                                                                                                                                                   PC.FIND.
          000020
                                004767
                                                        000000G
         000024
000026
                                103004
004767
                                                                                                                                                   1$
                                                                                                                             JSR
                                                                                                                                                                                                  ; 'MISSING OPERAND'
                                                        000000G
                                                                                                                                                   PC.ERR3
          000032
                                000167
                                                        000532
 40
                                                                                                                             MATCH: THE OPERAND: FROM THE COMMAND: LINE: AGAINST: A: TABLE: OF VALID: OPERANDS:
 41
 42
43
                                                                                                                                                                                                 ;NUMBER.OF.TABLE.ENTRIES.
;TABLE.OF.RESPONSES/RTN.ADDRESSES.
 44
                                                                                                                             MOV
                                                                                                                                                    #RU1LN,R0
          000036
                                012700
                                                       0000000G
0000000,
                                012702
004767
                                                                                                                                                    #RU1TBL,R2
 45
          000042
                                                                                                                             MOV
                                                                                                                                                                                                  ** TABLE OF TRESHORSES OF THE AGAINST TABLE OF THE TABLE OF TABLE 
                                                                                                                              JSR
                                                                                                                                                    PC.SCAN
 467
489
499
555
555
555
57
          000046
000052
                                 103004
                                                                                                                             BCC
                                                                                                                                                    2$
                                                                                                                                                                                                  ;OK, CONTINUE
                                                                                                                                                                                                   ; * INVALID - TABLE - NAME *
          000054
                                 004767
                                                        000000G
                                                                                                                              JSR
                                                                                                                                                    PC,ERR18
                                                                                                                                                    RUIX
          000060
                                 000167
                                                        000504
                                                                                                                              JMP
                                                                                                                              R1 -> ADDRESS.OF.ROUTINE.TO.BE.EXECUTED.
                                                                                                                                                                                                   :JUMP TO ROUTINE
          000064 000171 000000
                                                                                                                              JMH.
                                                                                                                                                    @(R1)
                                                                                                      2$:
                                                                                                                             RUN-WITH-A-SINGLE-CLOCK-
```

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TRUN-

```
TRUN-
                O M1110 27-MAR-80 15:40 PAGE 5-1
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      58
59
                                                                   SALL A ROUTINE TO SCAN THE COMMAND LINE FOR A LOOP INDICATOR. EG:
      60
                                                                    >RU-SC-L-
      61
                                                                   LOOP-FLAG-WILL-BE-SET-IF-INDICATOR-IS-PRESENT-
      62
63
          000070
                                                        RUSC::
      65
          000070
                      004767
                                 000000G
                                                                    TOP
                                                                                                     ;LOOP.ON CLOCK.?.
;RESET.TD.
                                                                              PC.LOOPR
      66
          000074
                      012767
                                 000000
                                             176376
                                                                   MOV
                                                                               #0.TD$SW
      67
           000102
                      012767
                                 024000
                                                                   MOV
                                                                               #KT$SCLK+T$MODE>,TD$CTW
          000110
                      032767
                                 000000G · 000000G
                                                                               #LOOP, BASE
                                                                                                     :LOOP.FLAG.ON.?
      69
70
71
72
          000116
                      001371
                                                                   BNE
                                                                               1$
                                                                                                     ;YES, REPEAT.
          000126
                      000167
                                 000444
                                                                   JMP
                                                                              RUIX
       73
74
                                                                   RUN NORMAL
                                                                   READ TD OUTPUT TO QR AND PRINT
       76
77
          000124
000124
                                                        RUOP::
       78
                      052767
                                 000000G · 000000G
                                                                   BIS
                                                                              #QP,BASE
                                                                                                     ;SET-FLAG-FOR-PRINT
       79
                      000404
                                                                              RUNC
                                                                                                     : RUN · NORMAL
      80
      81
      82
                                                                   RUN - NORMAL
      83
                                                                   READ . TD . OUTPUT . TO . QR . (NO . PRINT)
      84
      85
          000134
                                                        RUQN::
      87
          000134
                      052767
                                 000000G · 000000G
                                                                              #QH,BASE
                                                                   BIS.
                                                                                                     :SET-FLAG-FOR-NO-PRINT-
      8B
          000142
                      000400
                                                                              RUNC
      89
      90
      91
                                                                   RUN · NORMAL
      92
93
                                                                   ISSUE GIO FOR UNSOLICITED INTERRUPT FROM TERMINAL (THE LOOP FLAG WILL BE SET). THE LOOP FLAG WILL ALLOW CONTINUOUS RUNNING OF THE TERM DETECTOR UNTIL A CHARACTER IS ENTERED FROM THE TERMINAL:
      95
96
97
                                                                   LOAD BYTE TRANSLATOR, IF A BYTE TRANSLATOR OVERRIDE TBALE HAS BEEN BUILT (SEE THE 1CH1 AND 1DF1 COMMANDS)
THEN TRANSFER IT TO THE TERM DETECTOR, OTHERWISE TRANSFER
      98
      99
     100
                                                                   THE DEFAULT BYTE TRANSLATOR TABLE.
     101
     103 000144
                                                        RUNC::
     104
          000144
                     004767
                                 000000G
                                                                              PC.HANG
#0.TD$SW
                                                                   JSR
                                                                                                     : ALLOW-FOR - STOPP ING - TEST -
          000150
     105
                     012767
012702
                                 000000
                                           176376
                                                                   MOV
                                                                                                    RESET TD:

:TRANSFER SAME TABLE 4 TIMES

:LOAD START ADDRESS

:NUMBER OF WORDS IN TABLE
          000156
     106
                                 000004
                                                                   MOM
                                                                              #4.R2
     107
          000162
                     016767
                                 000000G · 000000G ·
                                                                   MOV
                                                                              TLOW, MSTR2
          000170
000174
     188
                     012700
                                 000100
                                                       100$:
                                                                   MOV
                                                                              #64.,R0
#RIDE,BASE
     109
                     032767
                                 000000G · 000000G
                                                                                                    ; IS OVERRIDE TABLE IN USE
     110
          000202
                     001403
                                                                   BEQ
                                                                              12$
     111
112
         000204
000210
                     012701
                                 000000G
                                                                   MOV
                                                                              #BTOVER,R1
                                                                                                     :POINT-TO-OVERRIDE TABLE
                     000402
                                                                   BR
                                                                              14$
     113 000212
                     012701
                                 000000G
                                                        12$:
                                                                   MOV
                                                                              #BTRANS,R1
                                                                                                    :R1 -> BYTE TRANS TABLE
                     012767
                                              76360 14$: MOV #T$ICD, TD$CTIJ. :SET. INTERFACE AND CONTROL Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
                                 000040 176360
```

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MACRO M: 110 27-MAR-80 15:40 PAGE 5-2. Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
TRUN-
                                     000030 176362
000000G-176364
      115
            000224
                         012767
                                                                            MOV
                                                                                         #T$BTAR,TD$TAW
                                                                                                                 :SELECT BYTE TRANS MAR
                         016767
                                                                            MOV.
                                                                                        MSTR2,TD$TDW
#T$BT,TD$TAW
(R1)+,TD$TDW
      116
            999232
      117
                         012767
            000240
                                     000020
                                                  176362
                                                                            MOV.
                                                                                                                  :SELECT-BYTE-TRANS MEMORY
            000246
                         012167
                                      176364
                                                                            MOV
      119
            000252
                         005267
                                     000000G
                                                                            INC
                                                                                        MSTR2
                                                                                                                  ;ADVANCE ADDRESS
            000256
                         005300
      120
                                                                            DEC
                                                                                        RЯ
            000260
                         00336i
      i2i
                                                                            BGT
                                                                                        104
      122
123
124
            000262
                         005302
                                                                            DEC
                                                                                                                  ;SUB FROM OUTER LOOP COUNT
            000264
                         001341
                                                                                         100$
                                                                           TRANSFER FROM THE LOCAL DATA BUFFER TO THE TERM DETECTOR INPUT BUFFER. THE FIELD DATALN: CONTAINS THE NUMBER OF 6-BIT BYTE CHARACTERS IN THE LOCAL BUFFER. CONVERT THIS VALUE INTO A NUMBER OF PDP 11 WORDS FOR CONTROLLING THE TRANSFER. 4 6-BIT BYTES FIT INTO 3 8-BIT BYTES, 8 6-BIT BYTES FIT INTO 3 16-BIT WORDS.
      125
      126
127
      128
      129
      130
      131
      132
            000266
                         016701
                                     000000G
                                                                            MOV
                                                                                        DATALN,R1
                                                                                                                  ; NUMBER · OF · 6-BIT · BYTES
       133
            000272
                         006301
                                                                                                                 #MULT.BY 2
#NUMBER:OF:6-BIT:BYTES:
#RESULT:=:NUMBER:OF:BYTES:X/3
                                                                            ASL:
                                                                                        R1
      134 000274
                         016702
                                     0000006
                                                                            MOV
                                                                                        DATALN, R2
            000300
      135
                         069291
                                                                            ADD
                                                                                        R2,R1
                                                                                                                  :NOW DIVIDE BY 8.
            000302
      136
                         006201
                                                                            ASR
                                                                                        R1
                                                                                                                  FOR NUMBER OF
                                                                                                                                                         - The
      137
            000304
                         006201
                                                                            ASR
                                                                                        R4
            000306
                         006201
                                                                            ASR
                                                                                        R4
                                                                                                                  :WORDS
      139
            000310
                         010146
                                                                                        R1.-(SP)
                                                                                                                  ;SAVE FOR REPEATED USE
      146
                                                                           FILL UP THE TERM DETECTOR INPUT BUFFER. MOVE THE LOCAL DATA BUFFER TO THE TERM DETECTOR REPEATEDLY ## UNTIL THE TD INPUT BUFFER IS FULL. WRAP AROUND ON BOTH BUFFERS (IE. SINCE THE AMOUNT OF DATA IN THE LOCAL DATA BUFFER WILL PROBABLY NOT BE ENOUGH TO FILL THE TD INPUT BUFFER. TRANSFER THE SAME DATA REPEATEDLY).
      141
       142
      143
      144
      145
       146
       147
            000312
000314
      148
                         011601
                                                                            MOV
                                                                                         (SP),R1
                                                                                                                  NUMBER OF WORDS IN DATA: TABLE
                                                                                                                 ;R2--> DATA-TABLE-
;R3-> INPUT-BUFFER-
;SIMULATE-DISK-INPUT-
;MOVE-FROM-PGM-BUFFER-TO-TD-INPUT-BUFFER-
       149
                         012702
                                      BBBBBBB
                                                                                         #DTBL,R2
                                                                            MOM
       150
            000320
                         016703
                                      000000G
                                                                            MOV
       15 i
            000324
                         012767
                                      000200 176360
                                                                                         #T$DISK,TD$CTW
      152.000332
                         312223
                                                                            MOV
                                                                                         (R2)+,(R3)+
TD$SW,R4
       153
             000334
                         016704
                                      176376
                                                                                                                  :LOAD TD STATUS REG:
:TEST FOR INPUT BUFFER FULL:
:FULL: START CLOCK NOW:
                                                                            MOV
       154
            000340
                         032704
                                     040000
                                                                                         #T$IBF,R4
       155
            000344
                         001011
                                                                            BHE
            000346
       156
                                                                                                                  ;RUN-OUT OF MEMORY
;YES, START-CLOCK-
;SUB-FROM-NUMBBER-OF-WORDS-
                         020367
                                      000000G
                                                                            CMP
                                                                                         R3.IHIGH
             000352
                         003006
                                                                            BGT
                                                                                         2$
       158
            000354
                         005301
                                                                            DEC
                                                                                         R1
                                                                            BGT -
       159
            000356
                         003365
                                                                                                                  :MOVE NEXT
                                                                                                                  :RELOAD-NUMBER-OF-WORDS-IN-1DATA1 TABLE-
:R2--> 1DATA1 TABLE-
:KEEP-MOVING-
            000360
                         011601
                                                                                         (SP),R1
       161
            000362
                         012702
                                     000000G
                                                                            MOV
                                                                                         #DTBL,R2
      162
            000366
                         000761
                                                                            BR
       163
                                                                            RUN-THE-TERM DETECTOR, WHEN-THE-TD-INPUT-BUFFER-GOES *NOT-FULL* TRANSFER-FROM-THE-LOCAL-DATA-BUFFER-TO-THE-TD-INPUT-BUFFER , R2--> LOCAL-DATA-BUFFER, R3 -> TD-INPUT-BUFFER,
      165
      166
       167
                                                                                         #KT$DISK+T$SCLK+T$MODE>, TD$CTW :S MULATE DIGENTIFICATION
      168 000370
                         012767
                                      024200
                                                   176360
                                                                                                                                                                                     THE WAY TO SAIL
                                                                                                                  ;LOOP?:
;NO: RESTORE:SP:AND:EXIT:
      169
            000376
                         932767
991479
                                     000000G.000000G.3$:
                                                                            BIT.
                                                                                         #LOOP,BASE
      170
            000404
                                                                            BED
                                                                                        RUST
            000406
                         016704
                                     176376
                                                                            MOV
                                                                                                      ;LOAD.TD STATUS.REG.
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                                                    Approved For Release 2005/07/12
```

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7.7

O M1110 27-MAR-80 15:40 PAGE 5-3 Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3 TRUN-; IS-INPUT-BUFFER-FULL-;YES, WAIT-FOR-NOT FULL-;RUN-OUT OF-INPUT-BUFFER-172-000412 032704 001367 040000 BIT. #TSIRE,R4 173 868416 BNE 3\$ CMP R3.IHIGH 000420 020367 000000G 175 000424 003402 BLE 45 ; NO, CONTINUE MOV iLow,R3 RE-INIT INPUT BUFFER POINTER FINISHED WITH DATA: BUFFER 176 177 016703 000426 MARABARA 000432 005301 DEC R1 178 000434 003003 BGT :NO, CONTINUE ;RELOAD NUMBER OF WORDS IN 'DATA' ;RE-INIT 'DATA' TABLE POINTER (SP),R4 179 999436 011601 MOM 000440 180 000000G MOV #DTBL,R2 012702 000444 5\$: (R2) + , (R3) +:LOAD INPUT BUFFER 181 182 183 184 185 READ-WITHOUT PRINT. 186 187 ;READ.TD OUTPUT.AND.NO.PRINT;NO. TRY READ.AND.PRINT. 000446 032767 000000G · 000000G #QN,BASE 189 000454 001410 BEQ. 7\$ 198 000456 016704 176344 6\$: MOV TD\$OAR,R4 :READ · OUTPUT · AVAILABLE · REGISTER 191 000462 032704 100000 BIT #T\$OUTA,R4 : IS OUTPUT AVAILABLE ;NO, CONTINUE RUN 000466 001743 BEQ 3\$ 193 000470 016705 176346 TD\$OTR,R5 :READ OUTPUT 194 000474 000770 BR 6\$; READ · UNTIL · EMPTY · 195 READ - AND - PRINT-197 000476 ;READ OUTPUT AND PRINT; ;NO; CONTINUE RUN; ;READ OUTPUT AVAILABLE REGISTER 198 032767 001734 000000G · 000000G · 7\$: RIT #QP.BASE 000504 199 BED 3\$ 000506 016704 176344 TD\$OAR,R4 MūV : IS OUTPUT AVAILABLE :YES, PRINT IT 201 000512 032704 100000 #T\$OUTA,R4 202-000516 001006 BNE 9\$ 046505 000000G #"EM.PRINT 203 000520 012767 MOV : FMPTY 000000G 204 000526 004767 **JSR** PC.CONSOL. :PRINT MESSAGE 205 000532 000721 :TRY-AGAIN BR 3\$ 206 000534 032767 000000G-000000G-9\$: #LOOP, BASE ;LOOP ON ;NO. EXIT: ;POINT:TO:PRINT:LINE RUST #PRINT, R5 207 000542 001411 BED 000544 000000G 208 MOV 012705 000550 016701 176346 MOV TD\$OTR,R1 :READ OUTPUT 210 000554 004767 000000G JSR PC » UNPK :CONVERT ----211 000560 004767 000000G **JSR** PC,CONSOL :PRINT-IT 212 213 000564 000750 BR :TRY AGAIN 8\$ 000566 000570 214 215 905726 RUST: TST (SP) +:RESTORE SP RU1X: 000570 216 BIC 042767 000000C-000000G #<QP+QN>.BASE :CLEAR · RUN · FLAGS 000576 004767 000000G JSR PC.KILL ;KILL AST (IF THERE IS ONE) 218 000602 000167 000000G JMP COMXX 219 220 000001 .END

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MACRO M1110 27+MAR-80 15:40 PAGE 5-4
TABLE Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
TRUN-
SYMBOL TABLE
ALUCKE = . 040000
                                BYTE4 = 000004
                                                               BYTE91=-000133
                                                                                              MNOBRE = 100000
                                                                                                                             Q$NCLK= 176000
ALUOE - - 004000
A01 = - 010000
                                                               BYTE92= 000134
                                                                                              MREN1 = 000001
MREN2 = 020000
                               BYTE40= 0000050
                                                                                                                             Q$PP = 000100
Q$PPSW= 000320
Q$PP2 = 000300
                               BYTE41= 000051
                                                               BYTE93= 000135
                               BYTE42= 000052
                                                               BYTE94= 000136
                                                                                              MSTR2 - ****** GX
BITVAL= 0000000
                               BYTE43 = 000053
                                                               BYTE95 = - 000137
                                                                                              MSYN.
                                                                                                                             Q$QHLT= 000013
                                                                                                     = .000040
BIT0
BIT1
       = 0000001
                               BYTE44= · 000054
                                                               BYTE96= 000140
                                                                                                      - 000144
                                                                                                                             Õ≢QL
        = 0000002
                               BYTE45= 000055
                                                               BYTE97= 000141
BYTE98= 000142
                                                                                                      = 000010
                                                                                                                             Q$QLA - = 000043
Q$QLA - = 000053
Q$QLB - = 000054
                                                                                              PLB
BIT10
                               BYTE46 = . 000056
                                                                                              PLC
BITii
       = 004000
                               BYTE47 = . 000057
                                                               BYTE99= 000143
                                                                                              PLD· = 000030
PLRWR·= 000200
                                                                                                                             Q$QLR·=·000001
BIT12 -- 010000
BIT13 -- 020000
                               BYTE48= 000060
                                                               BYTVAL = . 000144
                                                                                                                             Q$QW = 000042
                               BYTE49= 000061
                                                               CBKALL = . 001000
                                                                                              PLR:EN= 000200
                                                                                                                             Q$RDCD= 0000005
       = 040000
BIT14
                               BYTE5 = 000005
                                                               CBKULK = . 000400
CHOBRE = . 100000
                                                                                              PRINT: = : ***** GX
                                                                                                                             Q$RDMD- 000006
                               BYTE50= 000062
                                                                                                                             Q$REBK= 001000
Q$RNC = 006000
Q$RSC = 004000
                                                                                              ΩN = жжжжжж GX
BIT2
        = 000004
                               BYTE51 = . 000063
                                                               COMXX-=-жжжжжж GX
                                                                                              QP.
                                                                                                      = · ***** GX ·
BIT3
        =·000010
                               BYTE52= 000064
                                                               CONSOL= ****** GX
                                                                                              QR$CR1=-176420
BIT4
        ■ · 000028
                               BYTE53= 000065
                                                               CPCCEN= 010000
                                                                                              QR$CR2=:176422
                                                                                                                             Q$RSET= 000010
BIT5
        - 0000040
                               BYTE54= · 000066
                                                               CPREAD = . 040000
                                                                                              QR$LBR= 176424
                                                                                                                            Q$$M. = 100000
O$$P\\ = 000120
Q$$P2 = 000340
BIT6
        = 000100
                               BYTE55= 000067
                                                               CPWRTE = - 020000
                                                                                              Q$ATTN= 000100
        ≃ 000208
                               BYTE56 = · 000070
                                                               CSADRD = 000004
CSEOCI = 100000
CSOE = 000040
                                                                                              0$BCL #00000
Q$CCCP = -000040
BITS
        = 000400
                               BYTE57= 000071
                                                                                                                             ŔGQ.EN= 000200
                                                                                              Q$CHB - 000400
BIT9
                               BYTE58= 000072
BYTE59= 000073
        - 00 1000
                                                                                                                             RGQ.VA= 020000
BTOVER= ****** GX
                                                              CSWRTE= 000100
DATALN= ********* GX
                                                                                              Q$CHRL=:000200
                                                                                                                             RIDE
                                                                                                                                     = · жокококок GX
BTRANS= ******* GX
                               BYTE6 = 000006
                                                                                              Q$CLR - = - 000040
                                                                                                                             RUNC
                                                                                                                                       000144RG
                                                                                                                                                       002·
BYTE0 = 000000
BYTE1 = 000001
                               BYTE60= .000074
                                                               DBR.RD= 000001
                                                                                              Q$CNC -- 030000
Q$CP -- 000060
                                                                                                                             RUQN
                                                                                                                                       000134RG
                                                              DB$CPP= 001457
DB$SPT= 000026
                               BYTE61=-000075
                                                                                                                                       000124RG
                                                                                                                             RUOP
RUSC
                                                                                                                                                       002
BYTE10=-000012
BYTE11=-000013
BYTE12=-000014
                               BYTE62= 000076
                                                                                              Q$CPCC=\0000010
                                                                                                                                       000070RG
                                                                                                                                                       992
                               BYTE63= 000077
                                                               DB$TPC= 000023
                                                                                              Q$CP2 -- 000260
Q$CSC -- 010000
                                                                                                                             RUST
                                                                                                                                       000566R
                                                                                                                                                       คค2
                               BYTE64--000100
BYTE65--000101
                                                               DISPGS= 100000
                                                                                                                             RU1
                                                                                                                                       000020RG
                                                                                                                                                       002
BYTE13= 000015
                                                               DMAAWR = . 000005
                                                                                              Q$CSEL=-000360
                                                                                                                             RU1LN = . 000004 G
BYTE14= 000016
                               BYTE66= 000102
                                                               DMARRD= 000003
                                                                                              Q$CSET= 0000002
                                                                                                                             RILLITRE -
                                                                                                                                       000000RG
                                                                                                                                                       002
BYTE15= 000017
                               BYTE67= 000103
                                                               DMARWR = . 000004
                                                                                              Q$CSP.=.020000
Q$DMA.=.000001
                                                                                                                             RU1X
                                                                                                                                       000570R
BYTE16= 000020
                                                                                                                                                       002
                               BYTE68= 000104
                                                                         *****
                                                               DTBL --
                                                                                                                             SCAN
                                                                                                                                       жжжжжж БУ
BYTE17= 000021
                               BYTE69= 000105
BYTE7 = 000007
                                                                      = 010000
                                                               ENBR.
                                                                                              Q$ENBK = . 040000
                                                                                                                             SEQ.CI=-000010
BYTE18= 000022
BYTE19= 000023
                                                              ERR18 = ****** GX
                                                                                              Q$ENOP = . 020000
                                                                                                                             S$CLR - = - 000000
                               BYTE70= 000106
                                                               ERR3
                                                                     = ****** GX
                                                                                              Q$FAL -- 004000
Q$FC -- 000045
                                                                                                                             S$LA
                                                                                                                                       000001
BYTE2 - - 000002
                               BYTE71 = . 000107
                                                               FIND
                                                                      = · ****** GX ·
                                                                                                                             SSOB
                                                                                                                                       000005
BYTE20= 000024
                               BYTE72= 000110
                                                               HANG - - ******* GX
                                                                                                      = 000044
                                                                                                                                     = . 000006
                                                                                                                             SSOR
BYTE21= 000025
                               BYTE73= 000111
                                                               IHIGH = · жжжжжж GX
                                                                                              Q$FP
                                                                                                      = 000046
                                                                                                                             S$QX
                                                                                                                                     = .000004
                                                               KILL = ******* GX
BYTE22= 000026
BYTE23= 000027
                               BYTE74= 000112
                                                                                              Q$HBF·=·000002
                                                                                                                             .
S$SR
                                                               KILL.
                               BYTE75=:000113
                                                                                              Q$ICP -- 000006
                                                                                                                             S$S1
                                                                                                                                       000010
BYTE24= 000030
                               BYTE76= 000114
                                                               LOC:EN= 000100
                                                                                              Q$IHB - = - 000003
                                                                                                                                     = .000014
                                                                                                                             9$92
                                                              LOC.LM= 040000
LOC.WB= 100000
LOCP = ******* GX-
LOOPR = ******** GX-
BYTE25= 000031
                               BYTE77= 000115
                                                                                              Q$IHRL= 000002
                                                                                                                             TD$CTR=:176370
BYTE26=-000032
BYTE27=-000033
                               BYTE78= 000116
                                                                                              0$IMRP=.000007
                                                                                                                             TD$CTW≃ 176360
                               BYTE79= 000117
BYTE8 = 000010
                                                                                              Q$LBD - - 001000
                                                                                                                            TD$INL= 004000
TD$MEM® 000270
BYTE28= 000034
                                                                                             BYTE29= 0000035
                                                               MAREN1 = 000001
                               BYTE80= 000120
                                                                                                                             TD$0AR= 176344
BYTE3 = 000003
                               BYTE81= 000121
                                                               MAREN2 = : 004000
                                                                                                                             TD$0TR=-176346
BYTE30= 0000036
                               BYTE82= 000122
                                                               MARLOD= 010000
                                                                                                                             TD$QRD=:000274
BYTE31 = 000037
                               BYTE83=:000123
                                                               MAROUT= 000002
                                                                                              Q$LDPP= 002000
                                                                                                                             TD$SW·=·176376
                               BYTE84= 000124
                                                              MAR.LO= 002000
MAR.OU= 000040
                                                                                              Q$LHP. = .010000
Q$MNC. = .140000
                                                                                                                             TD$TAR= 176372
BYTE33= : 000041
                               BYTE05= 000125
                                                                                                                             TD$TAW= 176362
BYTE34= 000042
                                                              MBKALL = 001000
MBKCLK = 000400
                               BYTE86=:000126
                                                                                                      = 0000052
                                                                                                                             TD$TDR=. 126324
BYTE35 = 000043
BYTE36 = 000044
                               BYTE07 = . 000127
                                                                                                                             Q$MRP - = - 000040
                               BYTE98 = . 000130
                                                               MMADRD = 000100
                                                                                              0$MRP2=.000240...
Q$MSC.=.040000
Q$MSET=.000004
                                                                                                                             .ma.cowi
BYTE37= 000045
                               BYTE89 = . 000131
                                                              MMLEFT= 000002
MMOE = 000004
BYTE38 = . 000046
BYTE39= 000047
                               BYTE90 = . 000132
                                           MMURTE = 999919
Approved For Release 2005/07/11
                                                                                   CIA-RDP85-00514R000200020001-3 T$BD
                                                                                                                                     = .000010
```

```
TRUN M1110 27-MAR-80 15:40 PAGE 5-5
SYMBOL TA

Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3
 T$850---100000
T$8T---000020
                                                                                                       WORD26=-000064
WORD27=-000066
WORD28=-000070
                                                    T$SCLK=-020000
T$SEG1=-000000
                                                                                                                                                          WORD51= 000146
                                                                                                                                                                                                              WORD77=-000232
                                                                                                                                                           WORD52= 000150
T$BT = 000020
T$BTAR = 000030
T$BTD = 002000
T$CD = 000100
T$CLK = 002000
                                                                                                                                                                                                             WORD78=-000234
WORD79=-000236
WORD8 =-000020
                                                     T$SEG2=:000001
                                                                                                                                                          WORD53= 000152
                                                    T$SEG3= 000002
T$SO = 000001
T$UBUS= 100000
                                                                                                        WORD29= 000072
                                                                                                                                                          WORD54= 000154
                                                                                                                                                          WORD55= 000156
                                                                                                                                                                                                             WORD8 = 000020
WORD80= 000240
WORD81= 000242
WORD82= 000244
WORD83= 000246
                                                                                                        WORD3 - 000006
                                                                                                       WORD30=-000074
WORD31=-000076
WORD32=-000100
                                                                                                                                                           WORD56= 000160
                                                    T$1CLK=-000400
T$8BEN=-000020
T$DISK= 000200
T$DRD = 000004
                                                                                                                                                           WORD57 = . 000162
                                                                                                                                                          WORD58= 000164
WORD59= 000166
WORD6 = 000014
                                                   1988EN= 000020
UBD.IN=000020
UNPK = ************** GX-
WORD0 = 000000
WORD1 = 0000024
WORD11 = 000024
WORD11 = 000026
 T$EMEM= . 010000
                                                                                                        WORD33= 000102
                                                                                                                                                                                                              WORD84= 000250
T$FSAA= 000000
T$FSAB= 000004
T$FSAC= 000014
                                                                                                        WORD34= 000104
                                                                                                                                                                                                              WORD85=:000252
WORD86=:000254
WORD87=:000256
                                                                                                                                                          WORD66 = 9000170
WORD60 = 900170
WORD61 = 900172
WORD62 = 900174
WORD63 = 900176
                                                                                                       WORD35=-000106
WORD36=-000110
 T$FSB2≃-000010
                                                                                                        WORD37=-000112
T$IB -- 000024
T$IBAR -- 000024
T$IBAR -- 020000
T$IBF -- 040000
                                                                                                                                                                                                              WORD88= 000260
                                                                                                       WORD38=-000114
WORD39=-000116
WORD4 =-000010
                                                                                                                                                                                                             WORD89= 000262
WORD9 = 000022
                                                    WORD12--000030
WORD13--000032
                                                                                                                                                          WORD64= 000200
                                                                                                                                                                                                             WORD9 = 000022
WORD90= 000266
WORD91= 000270
WORD93= 000272
                                                                                                                                                          WORD65=-000202
WORD66=-000204
WORD67=-000206
                                                    WORD:4-000034
WORD:5-000036
                                                                                                       WORD40= 000120
WORD41= 000122
WORD42= 000124
T$167 - 040000
T$167 - 040040
T$MDDE - 04400
T$08 - 04400
T$08 - 04400
T$08F - 01000
                                                    WORD16= 000040
                                                                                                                                                          WORD68= 000210
WORD69= 000212
WORD7 = 000016
                                                    WORD17=-000042
WORD18=-000044
                                                                                                        WORD43= 000126
                                                                                                                                                                                                             WORD94= 000274
WORD95= 000276
WORD96= 000300
                                                                                                       WORD44=-000130
WORD45=-000132
                                                    WORD19= 000046
WORD2 = 000004
WORD20= 000050
                                                                                                                                                          WORD70=-000214
WORD71=-000216
WORD72=-000220
 T$0BRA= .000034
                                                                                                       WORD45=-000134
WORD47=-000136
                                                                                                                                                                                                              WORD97=-000302
 T$08WA= 000032
                                                                                                                                                                                                             WORD98=-000304
WORD99= 000306
T$000H - 00000
T$RBD0 = 00020
T$RNB = 000040
T$RSET = 04000
T$SC = 000022
                                                    WORD21=-000052
                                                                                                       WORD48= 000140
                                                                                                                                                           WORD73=-000222
                                                    WORD22=-000054
WORD23=-000056
WORD24=-000060
                                                                                                       WORD40= 000140
WORD49= 000142
WORD5 = 000012
                                                                                                                                                          WORD74= 000224
WORD75= 000226
WORD76= 000230
                                                                                                                                                                                                              WRDVAL = - 000310
                                                                                                                                                                                                             XTREAD= 001000

XTWRTE= 000400*
                                                                                                       WORD50= 000144
                                                    WORD25= 000062
 . ABS:
                 000000
                                         000
                  000000
                                         001
 TRUN
                 000606
                                         002
ERRORS DETECTED:
                                      0
VIRTUAL MEMORY USED: 3221 WORDS ( :13 PAGES)
DYNAMIC MEMORY: 3860 WORDS ( 14 PAGES)
ELAPSED TIME: 00:00:45
TRUN, TRUN/-SP=[20.1]IM,[20.1]TRUN
```

AIDTD.TSK

MEMORY ALLOCATION MAP TKB 27-MAR-80 Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3

TASK. NAME.:...AID.
PARTITION.NAME.: GEN
IDENTIFICATION.: 08
TASK. UIC. : [20,3].
STACK. LIMITS: 040216 041215 001000 00512.
PRG.XFR.ADDRESS: 051734
TASK.ATTRIBUTES: AL.CP.
TOTAL.ADDRESS.WINDOWS: 2.
TASK. IMAGE. SIZE.: 8032, WORDS.
TASK.ADDRESS.LIMITS: 040000 077253
R-W DISK.BLK.LIMITS: 000042.000110 000047 00039.

AIDTD.TSK;3 OVERLAY DESCRIPTION:

BASE -	TOP ·	LENG	TH·	
040000	071007	031010	12808.	TMAIN.
071010	072077	001070	00568.	TREG.
071010	073353	002344	01252.	TMEM.
071010	077253	006244	03236.	TDATA.
071010	071617	000610	00392.	TRUN.

```
MAP TKB PAGE 2. CIA-RDP85-00514R000200020001-3
*** ROOT SEGMENT: TMAIN
R/W-MEM- LIMITS: 040000 071007 031010 12808.
DISK-BLK-LIMITS: 000042-000073 000032-00026.
MEMORY-ALLOCATION-SYNOPSIS:
SECTION: ..
                                                      TITLE . IDENT, FILE.
. BLK.:(RW.I.LCL.REL.CON) 041216 021300 08896.
                              041216
                                      014224
                                              R6292.
                                                      TMAIN
                                                                      TMAIN: OBJ: 1
$$ALER:(RW,I,LCL,REL,CON)
                              062516
                                      000024
                                              00020.
$$ALVC:(RW.D.LCL.REL.CON)
$$AUTO:(RW.I.LCL.REL.CON)
                              062542 000130 00088.
                              062672
                                      000130 00088.
$$F$R1:(RW.D.GBL.REL.OVR)
                              063022
                                      002040 01056.
                              063022 002040
                                              01056.
                                                     TMAIN.
                                                                      TMAIN OBJ: 1
$$F$R2:(RW.D.GBL.REL.CON)
                              865862
                                      000104 00068.
$$MRKS:(RO,I,LCL,REL,OVR)
                              079540
                                      000076
                                              00062
$$OVDT:(RW.D.LCL.REL.OVR)
                              065166
                                      000020
                                              00016.
$$0VRS:(RW.I.LCL.ABS.CON)
$$RDSG:(RO.I.LCL.REL.OVR)
                              правова
                                      000000
                                              00000.
                              070636
                                      000150
                                              00104
$$RESL:(RW.I.LCL.REL.CON)
$$RESM:(RW.I.LCL.REL.CON)
$$RGDS:(RW.D.LCL.REL.CON)
                              065206
                                      003232
                                              Ø1690
                              132000
                                              04014.
                             070440 000000
070440 000002
                                              00000.
$$RTS : (RW.I.GBL, REL.OVR)
                                              00002.
$$SGD0:(RW.D.LCL.REL.OVR)
                              070442
                                     000000
                                              авааа.
$$SGD1:(RW.D.LCL.REL.CON)
                             070442
                                     000074
                                              00060.
$$SGD2:(RW.D.LCL.REL.OVR)
                             070536
                                     000002.00002.
$$WNDS:(RW.D.LCL.REL,CON) 070540 000000 00000.
GLOBAL SYMBOLS:
AHIGH:
        Ñ41424-₽
                   CLOW-
                           041436-R
                                       EFH:1
                                               000001
                                                          FRR21
                                                                  055026-R·
                                                                              INCVAL-041376-R-
                                                                                                 OLOW-
                                                                                                         041446-R
                                                                                                                            054224-R
                                                                                                                     SCAN-
ALOW.
        041426-R
                   CMILUN-000002
                                       ENDMEM
                                              055002-R
                                                          ERR22
                                                                  055022-R
                                                                              IO.DET-002000
                                                                                                 ONCE
                                                                                                         000010
                                                                                                                     SELTST-055156-R
APLACE · 041234-R
                   CNUM
                           000015
                                       ENDTST 054772-R
                                                          ERR23
                                                                  055016-R
                                                                              IO.RVB 010400
                                                                                                 DHT.
                                                                                                         002000
                                                                                                                     STAT-
                                                                                                                             041222-R
ASTFLG 000020
                   COMXX.
                                       ENFILE
                           051740-R
                                              Ø54776-R
                                                          ERR3
                                                                  055136-R
                                                                              IO.WVB 011000
                                                                                                 DUTT
                                                                                                         055012-R
                                                                                                                     STOP.
                                                                                                                             055006-R
BASE -
        Ø41232-₽
                   CONSOL -
                           054610-R
                                       EH1
                                               062632-R
                                                          ERR4
                                                                  055132-R
055126-R
                                                                              KILL
                                                                                      054124-R
                                                                                                 PACK
                                                                                                         054434-R
BASEL
        055162-R
                                                                                                                     STI
                                                                                                                             062552-R
                   COUNT:
                           Ñ414Ñ4-₽
                                       ERR I
                                               055146-R
                                                          ERR5
                                                                             LDCNTL .
                                                                                     052440-R
                                                                                                 PDATA
                                                                                                                     THÍGH.
                                                                                                         052620-R
BHIGH
        041430-R
                   CTBL
                           041454-R
                                                                                                                            041450-R
                                       ERR10
                                                                                      062562-R
062642-R
                                              055102+R
                                                          ERR6
                                                                  055122-R
                                                                             LD1
                                                                                                         053032-R
053126-R
                                                                                                                     TLOUGE, 044435
                                                                                                 PRONTI
BINWD
        041230-R
                   DATALN:
                           041406-R
                                                          ERR7
                                       ERR11
                                               055076-R
                                                                  055116-R
055112-R
                                                                             LI1
                                                                                                 PRDATA
BLOW-
        041432-R
                                       ERR12
                   DATA1
                           041416-R
                                               055072-R
                                                          ERR8
                                                                             LODE
                                                                                      000004
                                                                                                 PRINT
                                                                                                         047072-R
                                                                                                                     TRLUN
BTEND .
        046666-R
                   DATA2
                                                                                                                            999994
                           041420-R
                                       ERR13
                                               055066-R
                                                          ERR9
                                                                  055106-R
                                                                             LÖÖPR
                                                                                      054004-R
                                                                                                 PR1
                                                                                                         062572-R
                                                                                                                     TR1
                                                                                                                            062652-R
BT0VER · 046670-R
                   DATA3
                           041422-R
                                       ERR14
                                               955962-R
                                                          FIND
                                                                  054316-R
                                                                              LPTST-
                                                                                      055152-R
                                                                                                 QN
                                                                                                                     TR6TBL · 046266-R
                                                                                                         BBIBBB
BTRANS : 046466-R
                   \mathrm{DA}\,1
                           062612-R
                                       ERR 15
                                               055056-R
                                                          GCMBUF
                                                                  · 841236-R
                                                                              LUN.TT
                                                                                      000001
                                                                                                 DP
                                                                                                         000400
BUFFSA 052044-R
                                                                                                                     TXTFDB:051340-R
                                       ERR16
                   DBLD
                           053312-R
                                               055052-R
                                                          GCMLEN : 041360-R :
                                                                                                 RE1
                                                                             MEND
                                                                                      041374-R
                                                                                                         062542
                                                                                                                     TXTLUN-000003
BUFSET: 052232-R
                   DF I
                           962622-R
                                      ERR17
                                               055046-R
                                                          GCMPNT-041362+R
                                                                              MSTRT
                                                                                      041370-R
                                                                                                 RIDE .
                                                                                                         000100
                                                                                                                     UNPK
                                                                                                                             Ø54544-₽
BUES2:
       052222-R
                   DPLUS-
                           041410-R
                                       ERR18
                                              055042~R
                                                          GCONLY-053726-R
                                                                              MSTR2
                                                                                      041372+R
                                                                                                 RP 600200
RSPCN1 041400
                                                                                                                   DUORDS 041416-R
CHIGH:
       041434-R
                   DSAVE:
                           043540-R
                                       ERR19
                                              055036-R
                                                          HANG -
                                                                  054040-R
                                                                             OFFSET 053224-R
                                                                                                                                      1
CHLEN-
       041414-R
                   DSEND:
                           046264-R
                                       ERR2
                                              055142-R
                                                                          R: 0FF6 041412-R: RTNPT 041366-R
R: 0HIGH: 041444-R: RUI
CIA-RDP85-00514R000200020001-3
                                                          IHIGH: 041440-R:
                                                                                                                           007146
                                                                                                                     $DIV
CH1
       062602-R
                   DTBL -
                           041540-R
                                      ERR20
                                              055032-R
                                                          ILOW.
                                                                                                                     $MUL.
                                                                                                                             007116
                                      Approved For Release 2005/07/1
```

AIDTD.TSK:3

TMA IN

MEMORY ALLOCATION MAP TKB

27+MAR+80

AIDTD.TSK

MEMORY ALLOCATION MAP. TKB 27-MAR-80 Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3 : .

*** SEGMENT: TREG.

R/W-MEM- LIMITS: 071010 072077 001070 00568. DISK-BLK-LIMITS: 000074 000075 000002.00002.

MEMORY-ALLOCATION-SYNOPSIS:

SECTION

TITLE . IDENT. FILE . .

. BLK::(RW.I.LCL.REL.CON) 071010 000000 00000. TREG::(RW.I.LCL.REL.CON) 071010 001070 00568.

REG. :(RW.I.LCL.REL.CON) 071010 001070 00568. 071010 001070 00568. TREG.

\$\$ALVC:(RW.D.LCL.REL.CON) 072100 000000 000000. \$\$RTS::(RW.I.GBL.REL.OVR) 070440 000002.00002. TREG.OBJ:1

- n_G

GLOBAL SYMBOLS:

071536-R: REIA: 071552-R: REMS 071602-R 071726-R 071624-R REAA 071670-R: REILN 000013 071720-R: REITBL 071050-R: 071646-R: STA: 071234-R: RESC. 071356-R: STO: ,071332-R 071254-R: STSC: 071402-R 071426-R: STI 071124-R 071306-R: STILN 000010 STBT ST.1TBL - 071010-R -REBA RESW RETA 071050-R: STC: 071234-R: STCR: 071244-R: STI 071566-R: 071712-R: REOA RECR -071750-R RE1 071456-R STB

AIDTD.TSK:3 MEMORY ALLOCATION MAP TKB PAGE 4
TMEM 27-MAR-80 **Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3**

*** SEGMENT: TMEM . . .

/W. MEM. LIMITS: 071010 073353 002344 01252. "ISK-BLK-LIMITS: 000076 000100 000003 00003.

 ${\tt MEMORY-ALLOCATION-SYNOPSIS:}$

SECTION. ..

TITLE . IDENT: FILE . .

BLK::(RW,I,LCL,REL,GON) 071010 000000 00000.
TMEM::(RW,I,LCL,REL,CON) 071010 002344 01252.
071010 002344 01252.
\$\$ALVC:(RW,D,LCL,REL,CON) 073354 000000 00000.
\$\$RTS::(RW,I,GBL,REL,OVR) 070440 000002 000002.

TMEM.OBJ;1

GLOBAL SYMBOLS:

071432-R·LD1 071070-F 071466-R·LD1LN·000006 071342-R: LDCM: 071070-R: PRAM: 072750-R: PR1 =:**27**2372-R: 073004-R: PR1LN 000005 073102-R: PR1TBL:071040-R 072660-R: PRCM: LDBM-071376-R: LDIB: PRBM-072714-R PRIB LDBT. 071664-R LD1TBL 071010-R PRBT 072122-R: LD00: 073220-R PROB

AIDTD.TSK TDATA.

ALLOCATION MAP. TKB PAGE 5
27-MAR-80 Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3 MEMORY ALLOCATION MAP TKB

*** SEGMENT: TDATA

R/W-MEM- LIMITS: 071010 077253 006244 03236. DISK-BLK-LIMITS: 000101 000107 000007 00007.

MEMORY-ALLOCATION SYNOPSIS:

SECTION. ..

TITLE: IDENT: FILE:

. BLK; (RW,I,LCL,REL,CON) 071010 000000 00000. TDATA: (RW,I,LCL,REL,CON) 071010 002364 01268. 071010 002364 01268. TDATA

\$\$ALVC:(RW.D.LCL.REL.CON) 873374 000000 00000 \$\$RESL:(RW.I.LCL.REL.CON) 073374 003660 01968. \$\$RTS::(RW.I.GBL.REL.OVR) 070440 000002.00002.

TDATA.OBJ:1

GLOBAL SYMBOLS:

072102+R LIITBL 071020-R TRILN 000002 071702+R TRBT 073236-R TRITBL 071040-R 073144-R

TRIB. 073064-R

ALLOCATION MAP. TKB PAGE 6 27-MAR-80 **Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3** AIDTD.TSK;3 MEMORY ALLOCATION MAP TKB TRUN-

*** SEGMENT: TRUN-

R/W-MEM- LIMITS: 071010 071617 000610 00392. DISK-BLK-LIMITS: 000110 000110 000001 00001.

MEMORY-ALLOCATION-SYNOPSIS:

SECTION. ..

TITLE . . IDENT . FILE . .

TRUH.OBJ:1

\$\$RTS: (RW, I, GBL, REL, OVR) 070440 000002.00002.

GLOBAL SYMBOLS:

RUNC- 071154-R- RUQN 071134-R: RUSC: 071100-R: RU1 071144-R: RUOP 071030-R: RUILN 000004 RU1TBL - 071010-R

-- 77

*** TASK-BUILDER-STATISTICS:

TOTAL-WORK-FILE-REFERENCES: 40221.
WORK-FILE- READS: 0.
WORK-FILE-WRITES: 0.
SIZE-OF-CORE-POOL: 9802. WORDS-(38. PAGES)
SIZE-OF-WORK-FILE: 8192. WORDS-(32. PAGES)

ELAPSED TIME:00:00:28

MACRO M1110 27-MAR-80 15:17 PAGE 5 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3 OMAIN. .FITLE - QMAIN-2 HARDWARE QUERY RESOLVER MANUAL DEBUGGING AIDS MAIN-MODULE THIS-MODULE-PASSES-CONTROL-TO-ITS-SUB-MODULES-(HOR-PROCESSOR-MODULES) BASED ON-INFORMATION-IN THE-COMMAND-LINE-(TERMINAL-INPUT). THE-SUB-MODULES-CONTINUE TO-PARSE-THE-COMMAND-LINE, TRANSFERRING CONTROL-TO-THEIR-SUB-MODULES, THESE-SUB-MODULES-CONTINUE-TO-PARSE-THE-COMMAND-LINE, TRANSFERRING-CONTROL-TO-THEIR-SUB-ROUTINES. THE-SUB-ROUTINES-THE-SUB-ROUTINES-THE-SUB-ROUTINES-THE-SUB-ROUTINES-THE-SUB-ROUTINES-THE-SUB-ROUTINES-THE-SUB-ROUTINES-THE-SUB-ROUTINES-THE-SUB-ROUTINES-THE-SUB-TAKE-THE-COMMAND: 10 11 13 14 EXAMPLE, THKE THE CUMMAND:

>MR.LD.MD.0

THE 'MR' REPRESENTS THE FIRST LEVEL OF CONTROL AND IS PARSED

BY THE MODULE QMAIN, THE 'LD' REPRESENTS THE SECOND LEVEL OF EX

CONTROL AND IS PARSED BY THE QMAIN SUB-MODULE MRP, THE 'MD',

REPRESENTS THE THIRD LEVEL OF CONTROL AND IS PARSED BY THE

MRP SUB-MODULE MRLD, THE FOURTH LEVEL OF CONTROL A SUB-ROUTINE

OF MRLD, ACTUALLY CONTROLS THE LOADING OF THE HARDWARE; 16 17 18 19 20 21 22 23 24 25 SUB-MODULES OF OMAIN:
MRP MATCH REPORT PROCESSOR
CP CONTROL PROCESSOR 26 27 28 MRP -BCE. BUS CONTROL ELEMENT PIPELINED PROCESSORS 29 30 31 32 33 34 SP SUBDOCUMENT PROCESSOR SUB-MODULES.OF.MRP: LOAD MRPR PRINT 35 36 37 38 39 40 $\begin{array}{l} {\sf ALL\cdot OTHER\cdot COMMANDS\cdot (EXCEPT\cdot MICROCODE\cdot DEBUGGING\cdot COMMANDS)} \\ {\sf DEBUGGING\cdot COMMANDS\cdot} \end{array}$ MRREST -MRBUG -SUB-MODULES OF GP: CPLD CPPR LOAD PRINT 41 CPREST: ALL:OTHER:COMMANDS:(EXCEPT:MICROCODE:DEBUGGING:COMMANDS)
CPBUGI SOME MICROCODE DEBUGGING COMMANDS: 42 43 44 CPBUG2 THE REST OF THE DEBUGGING COMMANDS 45 46 47 SUB-MODULES-OF-BCE:-BCREST- ALL-BCE-COMMANDS 48 49 50 51 52 53 54 55 SUB-MODULES OF FPS: LOAD PRINT PPLD -PPPR PPREST ALL OTHER COMMANDS

SPREST ALL OTHER COMMANDS

SUB-MODULES OF SP:

LOAD PRINT

SPLD. SPPR.

QMAIN. 15:17 PAGE:6 Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3 EGNTROL-IS-RETURNED-TO QMAIN-WHEN-ONE-OF-ITS-SUB-MODULES-ENCOUNTERS-AT-THE-SECOND-LEVEL-OF-CONTROL-(SEE-ABOVE) ASTRING-THAT-IT-CANNOT-PARSE, THE ASSUMPTION IS-THAT-THIS-STRING-IS-THE-MNEMONIC FOR-ANOTHER-PROCESSOR, REQUIRING-A-58 59 60 61 TRANSFER OF CONTROL, FOR EXAMPLE, THE COMMAND 62 63 MR>CP.LD.CS.0 CANNOT BE PARSED BY MRP ((CP! IS NOT A VALID MRP COMMAND). CONTROL IS PASSED TO OMAIN WHICH CAN PARSE (CP!, CONTROL WILL THEN BE TRANSFERRED FROM QMAIN TO THE SUB-MODULE CP. 65 66 67 69 QMAIN ALSO CONTAINS DATA AND SUBROUTINES COMMON TO ALL OF ITS 70 SUB-MODULES. THERE ARE ALSO MODULES CONTAINING SUBROUTINES FOR THE OMAIN SUB-MODULES. THE SUBROUTINE MODULES ARE MRPSUB, CPSUB, AND PPSUB, ROUTINES IN THESE MODULES ARE GLOBAL, ALLOWING CROSS-USAGE, THUS THE QEX WINDOW MEMORY LOADING ROUTINE.

(LD4QW IN SUB-MODULE PPLD OF PPS) CALLS THE SUBROUTINE. 73 74 75 SEGCS: IN: MODULE: CPSUB: AND: SUBROUTINE: SEGMM IN: MODULE MRPSUB 78 ASSEMBLY: MCR>MAC.QMAIN,LP=IMO4,QMAIN. FROM-[5,3]. 80 81 TASK BUILD: 82 1. HOR STAND-ALONE PACK COMMAND FILE AIDQ2.CMD AIDQR/AL/CP/DA,AIDQR=QMAIN,MRP,MRLD,MRPR,MRREST,MRBUG, 84 CP.CPLD.CPPR.CPREST.CPBUG1.CPBUG2. 85 BCE, BCREST, PPS, PPLD, PPPR, PPREST, 86 87 MRPSUB, CPSUB, PPSUB, [1.50]RSX11M.STB/SS 88 89 PAR=PAR14K 90 ASG=TT0:1:2 91 92 93 94 95 96 TASK BUILD MUST BE DONE ON NPIC /04 97 98 100 101 AIDQR/AL/CP,AIDQR=AIDQR/MP 102 TASK = A I DOR 103 PAR=GEN:40000:40000 104 ASG=TT0:1:2 105 196 107 OVERLAY DESCRIPTION AIDOR . ODL: 108 QMAIN-[1,50]RSX11M.STB/SS-*(A,B.C.D) .ROOT 109 A٤ MRP-MRPSUB-CPSUB-**(MRLD, MRPR, MRREST, MRBUG)
CP-MRPSUB-CPSUB-PPSUB-(CPBUG1, CPBUG2, CPREST, CPLD, CPPR) .FCTR 110 В 111 .FCTR BCE-BCREST Dε .FCTR PPS-MRPSUB-CPSUB-PPSUB-(PPLD, PPPR, PPREST) 113 .FND

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QMAIN: MACRO:M1110 27-MAR-80 15:17 PAGE:7
                                             Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
     116
117
                                                                  LOCAL DATA AREAS
      118
     119
     120
                                                                  .MCALL OIOW$$,QIO$$,EXIT$$,ABRT$$,GCML$,GCMLB$,F$R$Z$,CLEF$$,MCALL ASTX$$,RDAF$$,WTSE$$,$ETF$$,RQST$$
      121
      122
     123
                                                                  .GLOBL · IO.WVB, IO.RVB, IO.ATA, IO.DET
     124
     125
                      000160
                                                       G. DPRM-
                                                                             000160
                      000001
                                                       LUH.TT
                                                                                                              :READ/WRITE TT0
      127
                      000001
                                                       EFN.1
                                                                                                              :EVENT.FLAG.FOR.TT0
                                                                  ==
                      000002
                                                       EFN:2
      129
                      ЙЙЙЙЙЙЗ
                                                       EFN:3
                                                                                                              #EVENT FLAG FOR HOR FINTERRUPTS
#EVENT FLAG FOR UNSOLICITED TERMINAL INTERRUPTS
#EVENT FLAG FOR COMMUNICATION WITH HOR LOADER
      130
                      000004
                                                       EFH:4
      131
                      000041
                                                       FEN. 33
                                                                  ==
     132
133
                      000002
                                                       CMILUN
                      000004
                                                       LODE
                                                                                                              :LOOP-ON-COMMAND.
:PRINT-ONE WORD-ONLY
:QIO-+ AST ISSUED.
      135
                      000100
                                                       DNCF
                                                                             100
      136
                      000200
                                                       ASTFLG.
                                                                             200
      137
                      001000
                                                                                                              REPEAT PROMPT:
CONTROL PRINTING OF MEMORY CONTENTS
                                                       RP
                                                                             1000
      138
                      002000
                                                       OUT
      139
                      004000
                                                       BREAK -
                                                                             4000
                                                                                                              :BREAKPOINT SET
      140
                      010000
                                                                             10000
                                                                                                              ; NO · QLB · ERASE ·
      141
      142
      143
                                                                  .NLIST-
                                                                            BEX-
      144
          000000
                      003654
                                066420
                                                       MYSELF:: RAD50
TSKTCB:: WORD
                                                                            ZAIDQRZ
      145
          000004
                                                                            0
                                                                                                             :TCB-OF-MY TASK
     146
          имирия
                      опород
                                                       OLDVEC::
                                                                   . WORD
                                                                            8
                                                                                                              :OLD · VECTOR · AT · 274
     147
          000010
                      046531
                                014732
                                                       LOADER: .RAD50
                                                                             ZLOADERZ:
      148
          000014
                                                      EFBUF:: .BLKW-
STAT:: .BLKW-
                                                                                                             :EVENT-FLAG-BUFFER-
     149
          000024
                                                                 .BLKW
                                                                            2.
     150
          000030
                     000000
                                                       ERWORD: . WORD.
                                                                                                             :INDEX:VALUE:FOR:ERROR:MESSAGE TABLE:
:TARGET:FOR:NUMERIC:CONVERSIONS:FROM:ASCII:
:ALL:PURPOSE:FLAG:
:PRELIM:BIT:SETTINGS FOR:CSR:1
                                                                            Й
          000032
     151
                                                       BINWD:: .WORD
                                                                            ø
     152
          000034
                      000000
                                                      BASE:: .
                                                                  .WORD
     153
          000036
                      000000
                                                      APLACE:: .WORD - GCMBUF:: .BLKW -
                                                                            Ø
          000040
     154
                                                                                                             COMMAND LINE BUFFER
                                                                            41.
     155
          000162
                     ававав
                                                       GCMLEN:: .WORD
                                                                            Ø
          000164
                     000000
                                                      GCMPHT:: .WORD
                                                                                                             :COMMAND.LINE.POINTER:
:RECEIVER.FOR.AST.CHAR
     157
          000166
                      000000
                                                      ASTWRD::
                                                                   .WORD
     158
          000170
                     000000
                                                      RTNPT:: .WORD
                                                                                                              :RTN-ADDR-SAVE-AREA-
          000172
                     000000
                                                      MSTRT:: .WORD
                                                                                                             START ADDR FOR MEMORY LOADING PRINTING
WORKING ADDR FOR LOAD PRINT TO THE SEAL ADDR FOR MEMORY LOADING PRINTING
     160
          000174
                     000000
                                                      MSTR2:: .WORD
     161
          000176
                     000000
                                                      MEND:: WORD
INCVAL:: WORD
RSPCNT:: WORD
     162 000200
163 000202
                     000000
                                                                            0
                                                                                                             #MEMORY INCREMENT VALUE : (COMMAND LINE) RESPONSE COUNT #MEMORY UPPER LIMIT :
                     000000
     164 000204
                     000000
                                                      UPLIM:: .WORD
     165
          000206
000206
     166
                                                       WWORDS:
                                                                                                             :LOAD/PRINT.VALUES
     167
                     000000
                                                      DATA:::.WORD
                                                                            Ø
     168
          000210
                     000000
                                                      DATA2:: .WORD
                                                                            0
                                                                                                                                   169 000212
170 000214
                     000000
                                                      DATA3:: .WORD
                     000000
     171
```

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0 M1110 27-MAR-80 15:17 PAGE 7-1
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172
                                                     MEMORY.LIMITS.TABLE
173
174 000216
              000377
                                           MMHIGH:: .WORD
                                                              255.
                                                                                           :MRP · MICROPGM · MEMORY
175 000220
176 000222
              000000
                                           MMLOW:: .WORD
                                           MDHIGH:: .WORD
                                                              4095.
                                                                                           :MRP · DATA · MEMORY ·
    000224
              000000
                                           MDLOW:: .WORD.
CSHIGH:: .WORD
178 000226
                                                              1023.
                                                                                           :CP - CONTROL - STORE
179 000230
180 000232
              000000
                                           CSLOW:: .WORD
              007777
                                           CDHIGH:: .WORD
                                                                                           :CP · DATA · MEMORY ·
181
    000234
              000000
                                           CDLOW:: .WORD.
182-000236
                                           QXHIGH::
                                           QXHIGH:: .WORD-
QXLOW:: .WORD-
                                                                                           :=X'7FFF' QEX-MEMORIES-
:=X'7600'
              076000
007777
183 999249
                                                              076000
184 000242
                                           FAHIGH:: .WORD
FALOW:: .WORD
LHHIGH:: .WORD
                                                              4095.
                                                                                           :FAL MEMORIES
i85
    000244
              000000
186 000246
                                                              1024.
                                                                                           :LHP·MEMORIES·(ALTOW X 400 元 一 社上EGAL ADDRESS) 。
187
    000250
              000000
                                           LHLOW:: .WORD.
                                                              Й
188 000252
              000177
                                           HLHIGH::
                                                      .WORD
                                                              127.
                                                                                           :HRL - BUFFER - IN - CC - MEMORY - 1
189 000254
              000000
                                           HLLOW:: .WORD.
190 000256
              000014
                                           BLHIGH:: .WORD.
BLLOW:: .WORD.
                                           BLHIGH::
                                                              12:
                                                                                           :BCL · IN · CC MEMORY ·
19 i
    000260
              000000
192
    000262
              999377
                                           SQHIGH:: .WORD
                                                              255.
                                                                                           ;SP-REFERENCE, QLB-MEMORIES-
     000264
              000000
                                           SQLOW:: .WORD
                                                              0
                                           SRHIGH:: .WORD
SRLOW:: .WORD
194 000266
                                                              255.
                                                                                           ;SP-SIDREAD-MEMORY-
195
    000270
              000000
196
    000272
              007777
                                           SDHIGH:: .WORD
                                                              4095.
                                                                                           SP-SIDMEM MEMORY.
     000274
              000000
                                           SDLOW:: .WORD
                                                              Ø
198
199
                                                     TABLE USED IN CONVERSION FROM ASCII HEX TO BINARY
200
201 000276
                                           TRTBL::
202
203 000356
              0003561
                                                               . +60
                 000
                           001
                                     002
                                                              0,1,2,3,4,5,6,7,8.,9.
                                                     .BYTE -
204
              000377
                                                              TRTBL+101
205
                  012
                           013
                                     014
                                                     .BYTE
                                                              10.,11.,12.,13.,14.,15.
206
              060475
                                                              TRTBL+177
207
208
                                                     TBALE · USED · IN · CONVERSION · FROM · BINARY · TO · ASCII · HEX ·
209
210 000475
                                           TRTBL2:: .ASCII /0123456789ABCDEF/
211
                                                     .EVEN
```

OMAIN.

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QMAIN.
          MACRO-M1110 27-MAR-80 15:17 PAGE-8
                                           Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
     213
214
215
216
217
218
219
220
                                                               FIRST-LEVEL-CONTROL-TABLE-
PROCESSOR-MNEMONICS-AND-ASSOCIATED-QMAIN-SUB-MODULE
                                                               ADDRESSES.
          000516
                                                     FTBL:
     221
222
223
          000516
                         115
                                    122
                                                                .ASCII
                                                                          ZMRZ
                                                                                                         :MATCH-REPORT-PROCESSOR
          000520
                     000000G
                                                                .WORD
                                                                          MRP.
          000522
                         103
                                    120
                                                                .ASCII
                                                                          ZCPZ
                                                                                                          :CONTROL · PROCESSOR
          000524
                     000000G
                                                                .WORD
                                                                          CP -
     225
226
          000526
                         102
                                    103
                                                                .ASCII:
                                                                          ZBC z
                                                                                                          ; BUS - CONTROL - ELEMENT
          000530
                     000000G
                                                                .WORD
                                                                          BOE
     227
          000532
                         129
                                    120
                                                                .ASCII
                                                                          ZPP/
                                                                                                          :PIPELINE · PROCESSORS
     228
          000534
                     000000G
                                                                .WORD
     229
          000536
                                    120
                                                                .ASCII
                                                                          ZSPZ
                                                                                                         ;SUBDOCUMENT-PROCESSOR
     230
          000540
                     000000G
                                                                .WORD
                                                                          SPS
     231
232
233
          000542
                         105
                                    130
                                                                .ASCII
                                                                          /EX./
                                                                                                         ; EXIT
          000544
                     0023701
                                                                .WORD
                                                                          EXIT
                     999996
                                                     FHUM
                                                                          <.-FTBL>/4
     234
235
236
                                                                                                                                                -..-:
                                                               PRINT-LINE
     237
     238
239
          000546
                         015
                                   012
                                                                                                          PRECEDE PRINT LETTEN
          000550
                                                    PRINT::
     249
                     000116
                                                                REPT
                                                                          78.
     241
                                                               BYTE
                                                                          40
     242
                                                                .ENDR
     243
     244
245
                                                               TABLE · OF · MESSAGES ·
     246
     247
     248
          000666
                                                                .BYTE
     249
          000667
                         015
                                   012
                                              015
                                                               .BYTE.
                                                                          15, 12, 15, 12
     250
251
          000673
                         105
                                   130
                                                                          /EXIT.HOR DEBUGGING AIDS/
15,12,0
15,12
          000722
                                   012
012
                         015
                                              000
                                                               .BYTE
     252
253
254
          000725
                         015
          000727
                                              115
                                   111
                                                               .ASCIZ
.BYTE
                                                                          /TIME · OUT · ON · FREE · RUN/
          000754
                         015
                                                                          15,12
     255
                                                                          ZEND OF FILE REACHEDZ
          000756
                         105
015
                                   116
                                              104
                                                               .ASCIZ
     256
          001002
                                   012
116
                                                                .BYTE
     257
258
                                                                         15,12.

ZEND OF MEMORY REACHED/.
15,12.

ZENTER: ANY: CHARACTER: TO: EXIT: LOOP/.
15,12,15,12,15,12.

ZHARDWARE: QUERY: RESOLVER MANUAL: DEBUGGING: AIDS/.
          001004
                         105
                                              104
                                                               .ASCIZ
.BYTE
          001032
                         015
105
                                   012
          001034
                                              124
015
                                   116
                                                               .ASCIZ
     260
          001075
                                   012
                                                               .BYTE.
                                              122
     261
          001103
                         110
                                    101
     262
          001160
                        015
015
                                   012
012
                                                                          15.12.0
                                              000
                                                               BYTE
          001163
                                                                .BYTE
                                                                          15,12
     264
265
          001165
                                   116
                                              126
                                                               .ASCIZ
.BYTE
                                                                         /INVALID COMMAND/
          001205
                        015
111
                                   012
    266
267
          001207
                                   116
012
                                                                          /INVALID LOOP OF TION
                                              126
                                                                .ASCIZ
          001233
                        015
                                                                         15.12
/INVALID UPPER MEMORY LIMITSA. **
                                                               .BYTE.
     268
         001235
001271
                        111
     269
                                   012
                                                                BYTE
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                                                                                   CIA-RDP85-00514R000200020001-3
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QMAIN-
               80 M1110 27-MAR-80 15:17 PAGE 8-1
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                                    116
012
     270 001273
                                                                 .ASCIZ.
.BYTE.
.ASCIZ.
                                               126
                                                                            /INVALID-LOWER MEMORY-LIMITS/
    270 001273
271 001327
272-001331
273 001373
274 001375
275 001425
276 001427
277 001461
                         015
                                                                           15.12.
ZINCORRECT: COMMAND: CHARACTER: COUNTZ
                                    116
012
116
012
                         111
                                               103
                         015
                                                                 .BYTE
                         111
                                               126
                                                                 .ASCIZ.
                                                                            /INVALID-MEMORY-MNEMONIC/
                         015
                                                                           15.12.
ZINVALID-REGISTER-MNEMONIC/
                         111
                                    116
012
                                               126
                                                                 .ASCIZ
                         015
                                                                 .BYTE
                                                                            15.12
                                    116
     278
279
          001463
                                               126
                                                                 .ASCIZ
.BYTE
                                                                            /INVALID-NUMERIC-VALUE/
          001511
                         015
                                                                            15.12
     280
          001513
                         115
015
115
015
116
015
                                    111
                                               123
                                                                 .ASCIZ
                                                                            /MISSING OPERAND/
     28 i
          001533
                                    012
                                                                 .BYTE
     202 001535
203 001555
                                               123
                                                                 .ASCIZ
.BYTE
                                                                            /MISSING COMMAND/
                                    012
117
012
                                                                           15.12.
NON-EXISTENT PROCESSOR/
          001557
                                               116
                                                                 .ASCIZ
     285 001606
286 001610
                                                                 .BYTE
          001610
                         120
377
                                    122
                                                                            PROCESSOR MNEMONIC MUST PRECEED NEXT COMMAND/
          001665
                                                      ASCIZ::
                                                                 .BYTE
     288
289
                                                                 .EVEN
                                                                           BEX
     290
     292
                                                                 COMMAND-LINE MACRO
     294
295
     296 001666
                                                                           GCMLB$ 2,,GCMBUF,CMILUN
     297 002174
                                                                FSRSZ$
```

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QMAIN-
         MACRO M1110 27-MAR-80 15:17 PAGE 9
                                        Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
     299
     300
    301
302
                                                          ENTER · HERE ·
     303
     304
         002174
                                                 START:
                                                                                                 : ISSUE · INFORMATION · MESSAGE
     305 002174
                                                          CALL
     306 002200
                                                                                                 SAVE MY-TCB
SAVE VECTOR AT 274
MOVE IN MY INTERRUPT HANDLER ADDR
                   816767
                             000000G · 175576
                                                                    $TKTCB,TSKTCB.
@#274,OLDVEC.
                                                          MOV.
                             000274 175572
0033330* 000274
         002206
                   013767
                                       175572
                                                          MOV.
     308 002214
                   012737
                                                                     #BPTISR,@#274
     309
     310
                                                          START.OFF.WITH.MASTER.RESET, NO-CLOCKS.IN.CSR.#1
     311
     312 002222
313 002226
314 002232
                                                                     #177777,-(SP)
                   012746
                                                           MOV-
                                                                                                  :CLEAR · CSR1
                   012746
                                                                     #Q$RSET,-(SP)
                             999919
                                                           MOV:
                                                                                                  :SET-RESET
                                                           CALL
                                                                    CSR1
                                                                                                  :RESET-HOR
     315 002236
316 002242
                   012746
                             000010
                                                                     #O$RSET,-(SP)
                                                                                                  :CLEAR - RESET -
                                                                                                 SET NO CLKS
MOVE TO CSR1
                   012746
                             176000
                                                           MOV-
                                                                     #<Q$NCLK>,-(SP)
                                                                                                                                     2 3, 3
          002246
                                                           CALL
                                                                    CSR4
     318
         002252
                    012746
                             000040
                                                                                                  REINHIBIT FAL PROCEESOR
                                                           MOV-
                                                                     #Q$CLR,-(SP)
     319 002256
                                                           CALL
                                                                    PPCR
     328
         002262
                   012746
                             000000
                                                          MOV
                                                                     #S$CLR,-(SP)
                                                                                                  ;CLEAR · SP · ADDRESS SELECT
         002266
     321
                                                          CALL
                                                                    SPCR
     322
     323
                                                           PUT-OUT-INITIAL PROMPT. LOCATE 2-CHAR PROCESSOR/COMMAND MNEMONIC.
     324
325
                                                          EG. IF THE COMMAND LINE READS: 
>MR LD MD 0
LOCATE THE 'MR'
     327
     328
329
                                                           MR
                                                                     MATCH · REPORT · PROCESSOR
                                                                     CONTROL PROCESSOR
                                                           CP
                                                           ВC
                                                                    BUS · CONTROL · ELEMENT · PIPELINED · PROCESSORS
     33 i
                                                           ΡP
     332
333
                                                                     SUBDOCUMENT PROCESSOR
                                                           EΧ
                                                                     EXIT DEBUGGING AIDS (COMMAND)
     335
          002272
          002272
002300
     336
                   012767
                             020040
                                      177550
                                                           MOV:
                                                                     #20040.GCMBLK+G.DPRM+2 : CLEAR PROCESSOR NAME
     337
                                                           CALL
CALL
                                                                     GCONLY:
                                                                                                  :ISSUE-GCML
          002304
                                                                                                  #FIND THE PROCESSOR MNEMONIC

#OK CONTINUE

#NOTHING IN COMMAND LINE
                                                                     FIND
     339
          002310
                    103003
                                                           BCC
         002312
002316
     340
                                                           CALL
                                                                     ERR2
                                                           BR
                    000765
                                                                     RESEL
         · 002320
002324
     342
                    022700
                             000002
                                                 1$:
                                                           CMP
                                                                     #2,R0
                                                                                                  :COMMANDS ARE 2 CHARS
     343
                    001403
                                                           BEQ
                                                                     COMXX
          002326
     344
                                                           CALL
                                                                     ERR8
                                                                                                  : INCORRECT CHAR COUNT
     345
346
          002332
                   000757
                                                                                                  TRY AGAIN
                                                                     RESEL
     347
     348
                                                           TOP · OF · PROCESSOR · LOOP ·
     349
350
                                                           MATCH PROCESSOR NAME AGAINST TABLE OF NAMES + CONTROL ROUTINE
                                                           ADDRESSES:
     351
     352
                                                          R1 -> PROCESSOR MNEMONIC IN THE COMMAND LINE
     353
                                                                                                                                THE RESERVE OF THE PROPERTY OF THE
     354
         002334 012700 000006
                                                 COMXX:: MOV-
     355
                                                                     #ENIIM.RA
                                                                                                  ;R0 = NUMBER OF PROCESSORS
                                        Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
```

QMA IN R0·M1110 27-MAR-80 15:17 PAGE:9-1 Approved For Release 2005/07/11 IA-RDP85-00514R000200020001-3 356 002340 357 002344 #R2--> TABLE-OF-PROCESSOR-MNEMONICS-#FIND-MATCH-IN-TABLE #OK, CONTINUE-#COMMAND-NOT-IN-TABLE-012702 · 000516' MOV-#FTBL,R2. CALL SCAN 358 002350 103005 BCC CALL 3\$ 359 002352 ERR2 360 002356 361 002362 CALL ERR1 :WHAT. TO. DO. NEXT. 000743 RESEL. :TRY AGAIN 362 363 TRANSFER CONTROL TO ONE OF THE QMAIN SUB-MODULES FOR FURTHER COMMAND LINE PARSING 364 365 366 367 368 R1 -> SUB-MODULE (CONTROL ROUTINE) ADDRESS 369 370 002364 000171 000000 371 3\$: JMP. @(R1) 372 373 374 EXIT-PROGRAM 375 376 002370 377 002370 378 002376 EXIT: 016737 175412 000274 MOV. OLDYEC,0#274 :RESTORE ORIGINAL VECTOR CONTENTS CALL ENDITST : PUT · OUT · END · OF · RUN · MESSAGE · 379 002402 EXIT\$S

```
QMAIN MACRO M1110 27-MAR-80 15:17 PAGE 10 Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
      382
      383
                                                                     ROUTINE TO PLACE A VALUE INTO CONTROL/STATUS
      384
                                                                     REGISTER 1 (176420).
      385
     386
387
                                                                     READ THE CURRENT VALUE OF CSR1, CLEAR THE BITS AT 4(SP) IN A CSR1 WORK AREA, SET THE BITS AT 2(SP) IN THE SAME WORK AREA, RE-WRITE CSR1.
      389
      390
                                                                     INPUT:
      391
                                                                                - BITS:TO:BE:SET:IN:CSR1
- BITS:TO:BE:CLEARED:IN:CSR1
                                                                     2(SP)
                                                                     4(SP)
     393
394
395 002410
                                                          ĆSR1::
      396
           002410
                       016767
                                   176420
                                              175420
                                                                     MOV-
                                                                                 QR$CR1,APLACE
                                                                                                                   :GET THE CURRENT VALUE:
:CLEAR FIRST
      397 002416
398 002424
                       046667
                                  000004
                                              175412
                                                                                4(SP).APLACE
2(SP).APLACE
APLACE.QR$CR1
                                                                     BIC
BIS
                       856667
                                  000002
                                              175404
                                                                                                                   :THEN SET
      399 002432
                       016767
                                   175499
                                              176420
                                                                                                                   *NOW RETURN IT
*MOVE RETURN ADDR TO TOP OF STACK BUMP STACK POINTER PAST ARGS
      400 002440
                                  000004
                       011666
                                                                     MOV.
                                                                                 (SP),4(SP)
     401 002444
402 002446
                       022626
                                                                                 (SP) + (SP) +
                                                                     RETURN
                                                                                                                   :LEAVE
```

- A TO THE RESIDENCE OF THE PARTY OF THE PAR

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OMAIN.
             0 M1110 27-MAR-80 15:17 PAGE 11
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    404
405
406
407
                                                      GALL HARDWARE QUERY RESOLVER LOADER
    408
409
410
                                                WHEN ON THE NPIC SYSTEM DO NOT USE CL IF CCIN AND CCOUT
    410
411
412
413
414
415
416 002450
417 002450
418
419
420
421 002462
422
423
424
425 002524
426 002536
                                                      ARE - RUNNING
                                               CLEAR GLOBAL EVENT FLAG
                                             ĆL::
                                                      CLEF$S: #EFN.33
                                                      REQUEST-LOADER-
                                                      RQST$S: #LOADER:
                                                      WAIT-FOR- "LOADER" TO-SET-EVENT-FLAG-
                                                      WTSE$S - #EFN.33
```

```
The State of the same
          MACRO M1110 27+MAR+80 15:17 PAGE 12.
Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
OMA IN
     428
429
     430
                                                                   SET.UP.BEFORE.PROMPTING.ON.ANY.*LD: COMMAND.OR.BEFORE
                                                                                                                                                               高市 <del>和</del>
特 下分
     431
                                                                   EXECUTING ANY 'PR' COMMAND.
                                                                   CALLED BY ROUTINES IN MMLD, MMPR, CPLD, CPPR, PPLD,
PPPR, THE FIELDS SET UP HERE ARE USED IN THE OMAINS
PROMPTING SUBROUTINE PDATA AND THE PRINT ROUTINE PRDATA.
     432
     433
     434
     435
     436
                                                                   INPUT:
     437
                                                                   2(SP)
                                                                              LOAD/PRINT START ADDRESS
                                                                              LOWER - MEMORY - LIMIT
UPPER - MEMORY - LIMIT
     438
                                                                   4(SP)
     439
                                                                   6(SP)
     449
     441
                                                                   OUTPUT:
                                                                   OUTPUT:
INCYAL - VALUE:BY:WHICH:MEMORY:ADDRESS:INCREMENTS:
MEND: - ADDRESS:OF:LAST:WORD:IN:MEMORY:TO:BE:LOADED/PRINTED.**
RSPCNT: - NUMBER:OF:WORDS:TO:EXPECT:IN:COMMAND:LINE:(MEMORY:WIDTH)
     443
     444
     445
     446
                                                                   C-BIT CLEAR
                                                                                         NO-ERROR-(START-ADDRESS-IS IN-RANGE)
ERROR-IN-RANGE-
     447
     448
     449
     450
                                                                   MEMORY.
                                                                                          INCVAL
                                                                                                                RSPCNT
     451
                                                                   MM
                                                                                                                2
     452
                                                                   MD
     453
                                                                                                                4
     454
                                                                   CD
     455
                                                                   HL
                                                                                         2
     456
     457
                                                                   ũШ
     458
                                                                   ΩL
     459
                                                                   FP
     460
     461
     462
                                                                   00
     463
                                                                   0.4
     464
                                                                   02
     465
                                                                   ũΧ
     466
                                                                   QB
     467
                                                                   SR
     468
                                                                   S1
     469
     470
     471
     472 · 002540 473 002546
                     012767
                                 000004
                                            175434
                                                       BUFS4::
                                                                  MOV
                                                                              #4,RSPCNT
                                                                                                                ; NUMBER OF WORDS TO PROMPT
                     012767
                                 000001
                                            175424
                                                                   MOV.
                                                                              #1.IHCVAL
                                                                                                                : BUFFERS : INC - BY - 1
     474
          002554
                      000433
                                                                   BR
     475 002556
                      012767
                                 000003
                                            175416
                                                       BUFS3::
                                                                  MOV
                                                                              #3,RSPCNT
                                                                                                                :NUMBER:OF WORDS:TO:PROMPT:
:BUFFERS:INC:BY:1
     476
477
          002564
                     012767
                                 000001
                                            175406
                                                                   MOV
                                                                              #1.INCVAL
                     000424
012767
          002572
                                                                   BR
                                                                              SET.
                                                                                                               :PROMPT-2-WORDS-
:BUFFERS-INC-BY-1-702
          002574
                                 000002
                                            175400
                                                       BUFS2::
                                                                  MOV
                                                                              #2,RSPCNT.
     479
          002602
                     012767
                                 000001
                                            175370
                                                                              #1.INCVAL
                                                                  MOV:
     480 002610
                     000415
                                                                  BR
     481
          002612
                     @12767
@12767
                                 000001
                                            175362
                                                      BUFSET:: MOY
                                                                              #1.RSPCNT-
                                                                                                                BUFFERS INC BY 1
          002620
                                 000001
                                            175352
                                                                  MOV.
    483 002626
484 00<u>2</u>630
                     000406
                                                                  BR
                                                                              SET
                                             75344 BUFSMt: MOV #1.RSPCNT
Approved For Release 2005/07/1
                     012767
                                 000001
                                            175344 BUFSM:: MOV
                                                                                        CIA-RDP85-00514R000200020001-3
```

QMAIN: MERO:Miii0 27	-MAR-80 15:17 PAGE 12- Approved For	-1 Release 2005/07/1 2 :IA-RDP	85-00514R000200020001-3
485 002636 012767 486	000002 175334 :	MOV: #2,INCVAL:	BUFFERS INC BY 2
487 002644 022767 488 002652 001003	177777 175324 SET:	CMP· #-i,MEND· BNE· 10\$	MEMORY.END.ADDR.SET UP:
489 002654 016667 490 002662 026766 491 002670 103003 492 002672 493 002676 000424	000004 175314 175304 000002 10\$:	MOV 4(SP), MEND CMP MSTRT, 2(SP) BHIS 1\$ CALL ERR9 BR BUFCX2	; SET END ADDR = MEMORY UPPER LIMIT ; IS LOAD ADDRESS IN RANGE (LOW) ; OK, CONTINUE ; OUT OF RANGE
494 002700 026766 495 002706 101403 496 002710 497 002714 000415	175272 000004 1 s:	CMP MEND,4(SP) BLOS 2\$ CALL ERRIØ BR BUFCX2	:IS ADDR IN RANGE (HIGH) # :YES CONTINUE :OUT OF RANGE
498 002716 026767 499 002724 101403 500 002726 501 002732 000406 502	175250 175252 2 \$:	CMP MSTRT, MEND BLOS 3\$ CALL ERR10 BR BUFCX2	: IS START ADDR LOWER THAN END ADDR : YES : OUT OF RANGE
503 002734 011666 504 002740 062706 505 002744 000241	000004 3\$: 000004	MOV· (SP),4(SP) ADD· #4,SP· CLC·	:MOVE-RETURN-ADDRESS :ADJUST-SP (FOR MEM-LIMITS)
506 002746 000405 507 002750 011666 508 002754 062706 509 002760 000261 510 002762	000004 BUFCX2	BR BUFXX2: MOV (SP).4(SP) ADD #4,SP: SEC: RETURN:	RETURN MOVE RETURN ADDRESS
	BUFAAZ	* KETUKN.	٠, ١

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QMAIN: MACRO:M1110 27-MAR-80 15:17 PAGE:13
                                                Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
      512
      513
     514
                                                                     PROMPTING CONTROL FOR LOADING ALL MEMORIES AND BUFFERS. THE READ NUMERIC DATA FROM THE COMMAND LINE, CONVERT AND STORE INTO A COMMON BUFFER, EG. IF THE INITIATING COMMAND IS:
     515
      516
      517
     518
519
                                                                      THIS ROUTINE WILL PUT OUT A PROMPT AND EXPECT 4 NUMERIC VALUES IN RETURN: >0000 0000 0000
     521
                                                                      THIS ROUTINE CONVERTS THESE ASCII HEX VALUES INTO BINARY
      522
                                                                      AND STORES THEM INTO DATA1, DATA2, DATA3, DATA4
      523
                                                                     INPUT: (SET-UP-BY-QMAIN-SUBROUTINE-BUFSET)

MSTR2- - CURRENT-MEMORY-ADDRESS

MEND- - MEMORY-UPPER ADDRESS-LIMIT-
RSPCNT- - NUMBER-OF-WORDS-TO-EXPECT-IN-COMMAND-LINE
      525
      526
     528
529
                                                                      OUTPUT:
      530
                                                                      WWORDS (DATA1, DATA2, DATA3, DATA4) DEPENDING UPON RSPONT
     531
     532
                                                                                                                    NORMAL RETURN (CR) RESPONSE TO PROMPT 7.7
                                                                     G-BIT-CLEAR, V-BIT-CLEAR-
C-BIT-CLEAR, V-BIT-SET
C-BIT-SET, V-BIT-CLEAR
     533
     534
                                                                                                                    END. OF MEMORY OR CONVERSION ERROR
     536
                                                                     REGISTERS 1, 4, 5 DESTROYED
     537
538
           002764
                                                          PDATA::
     540 002764
541 002772
542 002774
                       026767
                                  175204 175204
                                                                     CMP
                                                                                 MSTR2,MEND
                                                                                                                    #UPPER MEMORY LIMIT REACHED #NO# CONTINUE #END OF MEMORY REACHED.
                       101403
                                                                     BLOS
                                                                                  10$
                                                                      CALL
                                                                                 ENDMFM.
     543
           003000
                       000460
                                                                                                                     :SET CARRY AND EXIT
     544
     545 003002
                       016701
                                   175166
                                                                     MOV-
                                                                                 MSTR2.R1
                                                                                                                    :PREPARE TO PRINT ADDRESS:POINT TO PRINT LINE:CONVERT ADDRESS
           003006
     546
                       012705
                                  000550
                                                                     MOV.
                                                                                 #PRINT, R5
     547
           003012
                                                                     CALL
                                                                                 UNPK
     548
           003016
                                                                     CALL
                                                                                 CONSOL
                                                                                                                    :PRINT.OUT ADDRESS
     549
     550
           003022
                      012767
                                  020040
                                              177016
                                                                                 #20040.GCMBLK+G.DPRM+2
#20040.GCMBLK+G.DPRM+2
GCONLY
                                                                     MOV-
                                                                                                                    ;ERASE CR AND LF :
;ERASE PROCESSOR MNEMONIC :
     551
                       012767
                                  020040
                                              177012
                                                                     MOV.
     552.003036
                                                                     CALL
                                                                                                                    ; PROMPT
     553
          003042
003050
                       112767
                                  000015
                                              176776
                                                                     MOVE
                                                                                 #15.GCMBLK+G.DPRM
                                                                                                                    :RESTORE - CR
     554
                      112767
                                  000012
                                                                     MOVB
                                                                                 #12,GCMBLK+G.DPRM+1
                                                                                                                    :RESTORE - LF
           003056
                                                                                                                    RESTORE LF
LOCATE FIRST DATE WORD IN COMMAND LINE
CONTROL OF RESPONSE EXIST
WORDS FROM COMMAND LINE GO INTO THIS TABLE
CONVERT WORD TO BINARY
ON CONTINUE
                                                                      CALL
                                                                                 FIND
     556
557
           003062
                       103424
                                                                                 PDVX
                                                                     BCS
     558
           003064
                      012705
                                  0002061
                                                                     MOV
                                                                                 #WWORDS,R5
     559
           003070
                      015704
                                  175106
                                                                     MOV.
                                                                                 RSPCHT, R4
     560 003074
                                                          2$:
                                                                     CALL
                                                                                 PACK
     561
           003100
                       103003
                                                                     BCC
                                                                                 3$
           003102
                                                                                 ERR4
                                                                                                                    ; "INVALID · NUMERIC · VALUE :
                                                                                                                    : INVALID MODELS
: AND EXIT.
: MOVE WORD TO TABLE
: SUB-FROM LOOP COUNT.
:FINTOMED
     563 003106
                      000415
                                                                     BR
                                                                                 PDCX
                      016725
     564 003110
                                                         3$:
                                                                     MCC2.
                                                                                 BINWD, (R5)+
     565 AA3114
                      005304
                                                                     DEC
                                                                                 R4
     566
          003116
                      001414
                                                                     BEQ
                                                                                 PDCCX-
     567
          003120
                                                                     CALL
                                                CALL FIND FIND FIND HEXT WORD Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
                                                                                 FIND
     568 003124
                      103363
```

QMAIN. 0 M1110 27-MAR-80 15:17 PAGE:13-1 Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3 569 003126 570 003132-571 572-003134 573 003136 574 003144 575 003142-576 003144 577 003145 578 003150 579 003152-580 003154 CALL BR ERR3 PDCX : "MISSING OPERAND: 000403 000241 000262 CLC: SEV: BR PDVX: . :INDICATE <CR> RESPONSE. 000405 000242 000261 $\mathtt{PDD} \times$ PDCX: CLV-SEC. ;END.OF.MEMORY.OR.CONVERSION.ERROR 000402 PDDX BR 000241 000242 PDCCX: CLC. PDDX: RETURN.

```
QMAIN: MACRO:M1110 27-MAR-80 15:17 PAGE:14
                                                Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
      582
583
                                                                      COMMON.PRINT ROUTINE.
THIS.ROUTINE CONVERTS.VALUES.IN.THE.FIELD.'WWORDS? TO.
ASCII.HEX.(DEPENDING.ON.RSPCNT) AND.PRINTS TMHEM.(TT0)
      584
      585
      586
587
      588
      589
                                                                                             - WHEN LOOP.OPTION.IS.IN.EFFECT, PRINT.1 WORD.ONLY.
- CONTROL.PRINTING.OF.1 WORD.WHEN.#OUT.IS.SET.
- NUMBER.OF.WORDS.TO.PRINT (SEE. BUFSET? RTN)
- MEMORY.ADDRESS (SEE. BUFSET?)
- MEMORY.WORDS.(DATA1, DATA2, DATA3, DATA4)
                                                                      #OUT.FLAG.
      590
                                                                                                                                                                                    A TO
      591
                                                                      RSPCNT.
      592
      593
                                                                      WWORDS.
      594
      595
                                                                      REGISTERS 1, 3, 4, 5 DESTROYED
      596
      597
      598 003156
                                                           PRDATA::
      599
           003156
                       032767
                                   002000
                                               174650
                                                                                  #OUT,BASE
                                                                                                                     :OUTPUT-CONTROL-ON-
      600
           003164
                       001407
                                                                      BEQ
                                                                                  10$
                                                                                                                     ;NO, SKIP OUTPUT CONTROL
;ONE LINE PRINTED
     601 003166
602-003174
                       032767
                                   000100
                                               174640
                                                                      BIT
                                                                                  #ONCE,BASE
                       001026
                                                                      BNE
                                                                                  PRDX
                                                                                                                     :YES, EXIT
     603
           003176
                       052767
                                   000100
                                              174630
                                                                      ВІЗ
                                                                                  #ONCE, BASE
     604
     605 003204
606 003210
                       016701
                                   174764
                                                           10$:
                                                                      MOV.
                                                                                                                     :FIRST CONVERT ADDRESS TO ASCII:
                                                                                  MSTR2,R1
                       012705
                                   0005501
                                                                      MOV-
                                                                                  #PRINT, R5
     607
           003214
                                                                                  UNPK
                                                                      CALL
                                                                                                                     PERFORM CONVERSION.
     608
     609 003220
                       012704
                                   000206*
                                                                      MOV
                                                                                  #WWORDS,R4
                                                                                                                     :POINT TO WORDS FOR PRINTING :NUMBER OF MEM WORDS TO PRINT :ADVANCE PRINT LINE POINTER
                       016703
062705
012401
     610 003224
611 003230
                                   174752
                                                                      MOV.
                                                                                  RSPCNT,R3
#2,R5
                                   000002
                                                                      ADD.
           .003234
     612
                                                                      MOV.
                                                                                  (R4) + R1
                                                                                                                     :LOAD ONE WORD
     613 003236
                                                                      CALL
                                                                                  UNPK
                                                                                                                     :CONVERT IT TO ASCII
     614 003242
                       005303
                                                                      DEC -
                                                                                  R3
                                                                                                                     DEC-WORD-COUNT-
REPEAT-
PRINT-LINE-
     615 993244
     616 003246
617
                       001371
                                                                      BNE .
                                                                                  145
                                                                      CALL
                                                                                  CONSOL -
     618 003252
                                                          PRDX:
                                                                      RETURN -
```

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QMA IN
               0-M1110 27-MAR-80 15:17 PAGE-15
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    620
621
622
623
624
                                                             GET · COMMAND · LINE · FROM · TERMINAL ·
                                                             OUTPUT:
                                                            625
     627
    628
629
630
                                                            SEE 'FIND' SUBROUTINE FOR THE USE AND UPDATING OF THESE FIELDS.
    631
632-003254
633-003254
                                                   GCONLY::
                    012700
                              000040'
                                                             MOV-
                                                                       #GCMBUF,R0
                                                                                                     :POINT.TOFCOMMAND:LINE.BUFFER:NUMBER.OF WORDS IN BUFFER:CLEAR.COMMAND.LINE.
     634 003260
                    012701
                              000051
                                                             MOV.
                                                                       #41..R1
(R0)+
     635 003264
                    005020
                                                   15:
                                                             CLR
    636
637
         003266
                    005301
                                                             DEC
         003270
                                                                                                     :FINISHED?
                    001375
                                                             BNE
                                                                       1$
                                                                                                     ; NO -
     638
    639 003272
640 003306
641 003314
                                                            GCML$
MOV∙
                                                                       #GCMBLK
                              000146
000040*
                                                                      G.CMLD(R0),GCMLEN-
#GCMBUF,GCMPNT
#GCMBUF,R1
                    016067
                                        174646
                                                                                                     ;SAVE LENGTH:
;INIT COMMAND LINE POINTER
                    012767
                                        174642
                                                             MOV.
    642.003322
643 003326
                    012701
                              0000401
                                                            MOV.
RETURN
                                                                                                     POINT RI TO COMMAND LINE
```

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Holy .. Tieffe den je e total
QMAIN: MACRO:M1110 27-MAR-80 15:17 PAGE:16
                                               Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
     645
     646
                                                                     INTERRUPT SERVICE ROUTINE TRAP INTERRUPTS FROM HOR THROUGH VECTOR ADDRESS 274 SET EVENT FLAG 3
MICROCODE (MRP AND CP) DEBUGGING ROUTINES WILL READ CSR #2 AND DECODE THE INTERRUPT
     647
     648
649
      650
      651
     652
653
      654 003330
                                                         BPTISR:
     655 003330
656
657 003344
                                                                     SAVE
                                                                                R0,R1,R2,R3,R4,R5
                       016705
                                  174434
                                                                                                                  MOV.
                                                                                TSKTCB,R5
     658 003350
659 003354
                      012700
                                 000003
                                                                    MOV
CALL
BIS
                                                                                #EFN.3.RØ
$CEFI
RØ.(R1)
                       050011
      660 003360
                                                                                                                  :SET-LOCAL FLAG:
:DECLARE-SIGNIFICANT EVENT-
      661 003362
                                                                     CALL
                                                                                $DRDSE -
     662.
663 003366
664 003402. 000002.
                                                                     RESTOR R0.R1.R2,R3.R4,R5
```

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OMAIN
              O-M1110 27-MAR-80 15:17 PAGE-17
                                        Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-377
    666
667
    668
                                                          DETECT-LOOP-INDICATOR-IN-COMMAND LINE.
    669
670
    671
         003404
                                                 LOOPR::
    672-003404
                                                          CALL
                                                                    FIND
                                                                                                 :LOCATE · RESPONSE
    673
         003410
                    103437
                                                          BCS
                                                                    LOOPX
                                                                                                 ;NOTHING THERE, EXIT
;LOOP INDICATOR
    674
         003412
                   122711
                             000114
                                                          CMPB
                                                                    #*L,(R1)
    675
         003416
                   001403
                                                          BEO.
                                                                    HANG
                                                                                                 OK, CONTINUE.
     676
         003420
                                                                    ERR11
                                                          CALL:
                                                                                                 : WRONG CHARACTER
    677
678
                   00043i
         003424
                                                          GIVE-DIRECTIONS-FOR-EXITING-LOOP ISSUE-010-(ATTACH) FOR UNSOLICITED-CHARACTER-INTERRUPT-
    679
     680
    681
     682 - 003426
                   952767
                             999299
                                       174499
                                                 HANG::
                                                          віз
                                                                    #ASTFLG,BASE
                                                                                                 ;SET-FLAG-FOR-QIO-ISSUED
;SET-FLAG-FOR-LOOP-
     683
         003434
                   052767
                             000004
                                       174372
                                                          BIS
                                                                    #LOOP, BASE
     684
         003442
                                                          CALL .
                                                                    STOP
                                                                                                 :GIVE DIRECTIONS FOR STOPPING TEST
     685
     686
         003446
                                                          QIO$S.
                                                                    #IO.ATA, #LUN: TT,,,,< #AST>
     687
     688 003510
                                                 LOOPX:
     689
         003510
                                                          RETURN
     690
     691
     692
                                                          HANG-QIO-FOR INTERRUPT FROM TERMINAL (BREAKPOINT RTNS)
     693
     694
         003512
     695
                                                 HANG2::
     696
         003512
                   052767
                             000200
                                       174314
                                                          BIS
                                                                                                 ;SET-FLAG-FOR-QIO-ISSUED-
                                                          0.10$8
                                                                    #IO.ATA, #LUN.TT, , , , < #AST2>
     698
         003562
                                                          RETURN -
     699
700
                                                          KILL-AST-(BY DETACH) DETACH-BECAUSE-THE-LOOP-QIO-ATTACH-AND-THE BREAKPOINT-QIO-ATTACH-EACH-HAS-ITS-OWN-AST.
     70 i
     702
     783
     704
     705
         ุคค3564
     706
707
          003564
                   042767
                             000004
                                      .174242
                                                          BIC
                                                                    #LOOP, BASE
                                                                                                 ;CLEAR · LOOP · FLAG ·
     708
         003572
                   032767
                             000200
                                                                                                 ;HAS-A-QIO BEEN-ISSUED?
;NO, DO-NOT-DETACH-
;CLEAR-QIO FLAG-
                                       174234
                                                                    #ASTFLG,BASE
     789
         003600
                   001423
                                                          BEQ
                                                                    1$
         003602
     710
                                       174224
                             000200
                                                          BIC.
QIOW$S.
                                                                    #ASTFLG,BASE
                   042767
     711
         003610
                                                                    #IO:DET, #LUN.TT
     712.003650
                                                 1$:
                                                          RETURN
```

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e william the super part blance to be ever the

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```
714
715
716
717 003652
718 003655
719 003656
720 003664
721
722
723
724 003672
725 003672
726 003676
727
                                                                        AST-FOR-LOOP ON-TEST-QIO-
                                                           ;
                                                           AST:
                                                                                     (SP)+,ASTWRD.
#LOOP,BASE.
                                                                       MOV∙
BIC∙
ASTX$S∙
                                                                                                                            ;GET·CHAR·OFF·STACK·
;CLEAR·LOOP·FLAG·
                   012667
                                 174310
                                000004 174150
                    042767
                                                                        AST-FOR-BREAKPOINT-QIO
                                                           ÁST2:
                                                                                     (SP)+,ASTWRD
                                                                                                                            ;SET-EVENT FLAG-FRO-TERMINAL-INTERRUPT-
                                                                        SETF$S: #EFN.4
                                                                        ASTX$S
```

```
0-M1110 27-MAR-80 15:17 PAGE-19
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QMAIN.
     730
731
732
                                                                      SCAN-A-TABLE FOR-A-VALID-COMMAND/MNEMONIC
                                                                      INPUT:
                                                                      R0 = NUMBER OF ENTRIES IN COMMAND TABLE
R1 -> CHAR STRING IN GCML COMMAND LINE
     733
     734
735
                                                                          -> TOP OF COMMAND TABLE
     736
     737
                                                                      DUTPUT:
                                                                      R1 -> ROUTINE-THAT-GOVERNS-THE-COMMAND-(IF MATCH-WAS MADE)
R1 -> CHAR-STRING-IN-COMMAND-LINE-(IF-NO-MATCH-WAS-MADE)
R0 =-RELATIVE-POSITION OF-MATCHED-ENTRY-IN TABLE-
     738
     739
     740
     741
742-003716
                                                           SCAN::
     743 003716
                       010346
                                                                      MOV.
                                                                                  R3,-(SP)
                                                                                                                     :SAVE - R3
     744 003720
745 003722
                       010046
                                                                                                                                                         SAVE ** ENTRIES SAVE POINTER TO BEGINNING OF STRING
                                                                      MOV
                                                                                  R0 = (SP)
          003722
                      010146
                                                                                  R1,-(SP)
     746
     747
          003724
                       011601
                                                                                                                     ;POINT TO NON-BLANK, IN COMMAND LINE : NUMBER OF CHARS IN NON-BLANK FIELD : DOES COMMAND LINE MATCH TABLE ENTRY : NO TRY NEXT TABLE ENTRY : SUB FROM LOOP COUNT
                                                          FHOUT1: MOV-
    749 003725
749 003732
750 003734
193736
                                                                                  (SP),R1
                                                                                  #2,R3
(R1)+,(R2)+
                       012703.
                                  000002
                                                                      MOV
                       122122
                                                                      CMPB
                       001003
                                                                                  FNOUT2
     751
           003736
                       005303
                                                                      DEC
     752.003740
753 003742
754 003744
                                                                      BNE
                                                                                  FHIH1
                       000411
                                                                      BR
                                                                                  FNMTCH -
                                                                                                                     :COMMAND.FOUND.IN.TABLE
                                                                      ADD
                                                                                                                     :ADD. #- UNCOMPARED CHARS TO POINTER:
THEN ADJUST TO NEXT TABLE ENTRY
                       868382
                                                          FNOUT2:
                                                                                  R3.R2
     755
          003746
                       005202
                                                                      INC
     756 003750
757 003752
                       005300
                                                                      DEC
                                                                                  RA
                                                                                                                     ; SUB FROM OUTER LOOP COUNT
                      .001364
                                                                      BNE
                                                                                  FNOUT1
                                                                                                                     ;TRY-AGAIN
     758
          003754
                                                                                  (SP)+,R1
(SP)+,R0
                      012601
                                                                      MOV
                                                                                                                     :RESTORE - R1
                                                                                                                                                          759 003756
760 003760
761 003762
                       012600
                                                                      MOV:
                      012603
                                                                      MOV.
                                                                                  (SP) + R3
                      000261
                                                                                                                     :COMMAND NOT IN TABLE
     762 003764
                                                                      RETURN
     763
     764 003766
                       010201
                                                          FNMTCH: MOV-
                                                                                                                     :POINT-R1 AT-RTN-ADDR-IN-TABLE,
:POINT-TO-INCOMING-R0 ON-STACK
                                                                                  R2,R1
     765 003770
766 003774
                      062706
                                  000002
                                                                      ADD
                                                                                  #2,SP
                                                                                                                     GET TOTAL # TABLE ENTRIES GET POSITION OF MATCHED ENTRY
                      012602
                                                                                  (SP)+,R2-
           003776
     767
                       160002
                                                                      SUB
                                                                                  R0.R2
     768 004000
                       010200
                                                                      MOV
                                                                                  R2,R0
(SP)+,R3
                                                                                                                     :PUT IN RØ FOR RETURN
     769
          004002
                      012603
                                                                      MOV
                                                                                                                     ; RESTORE · R3
     770
          004004
                      000241
                                                                      0.10
     771 004006
                                                                      RETURN
```

QMAIN: MACRO: M1110 27-MAR-80 15;17 PAGE F20 Release 2005/07/12: CIA-RDP85-00514R000200020001-3 FIND THE NEXT NON-BLANK IN THE COMMAND BUFFER: 773 THEN FIND THE LENGTH OF THE STRING THAT STARTS WITH THAT CHARACTER. 774 775 776 777 GCMLEN - NUMBER OF UNPROCESSED BYTES IN COMMAND LINE 778 779 GCMPNT: - ADDR: OF: NEXT UNPROCESSED: POSITION: IN: COMMAND: LINE: 780 R1 -> STRING, R0 = LENGTH OF STRING 78 i GCMLEN, GCMPNT-UPDATED FOR-NEXT-ENTRY-INTO THIS-ROUTINE-783 THIS ROUTINE IS DESIGNED TO BE ENTERED A NUMBER OF TIMES. IN THE PARSING OF A COMMAND LINE, THE FIELDS GCMLEN AND GCMPNT ARE REFRESHED WHEN A NEW COMMAND LINE IS READ. 784 785 (SEE-THE-SUBROUTINE-*GCONLY*). 787 788 789 790 004010 FIND:: 791 004010 010246 MOV: R2,-(SP) 792 994912 016701 174144 GCMLEN, R1 793 004016 001440 FSECX. BEQ 004020 016702 MOV GCMPNT, R2 ;LOAD · CURRENT · POINTER ;LOOK FOR A BLANK; ;LOOK FOR A BLANK; ;OK, BUMP TO NEXT CHAR; ;COMMA IN COMMAND LINE; ;TREAT COMMA AS BLANK; ;BUMP POINTER; ;SUB FROM REMAINING LENGTH; 795 004024 122712 000040 CMPB #40,(R2) 004030 796 001403 BEO 105 122712 004032 000054 CMPB #1,,(R2) 798 004036 001004 2\$ BNE 799 004040 005202 10\$: INC R2 · 800 004042 005301 DEC R1 004044 001367 BNE 1\$ 802 - 004046 000424 ;NO:HON-BLANK:FOUND 803 004050 010246 MOV 2\$: R2,-(SP) ; TEMP SAVE POINTER: TO: BEGINNING: OF: STRING: 884 :CLEAR · CHAR · COUNT · 805 004052 005000 CLR RØ. 004054 122712 3\$: :LOOK FOR A BLANK 000040 #40.(R2) FOUND END OF STRING TREAT COMMAS AS BLANKS 807 004060 001407 BEQ. 4\$ 888 004062 122712 000054 CMPB #1,,(R2) 809 004066 001404 BEQ. 4\$ 810 004070 005202 :BUMP - POINTER -811 004072 812 004074 813 004076 005200 INC RØ :BUMP CHAR COUNT ;SUB FROM BYTES REMAINING 005301 DEC R1 001366 :SAVE POINTER FOR NEXT TIME :SAVE BYTES REMAINING FOR MEXT TIME :POINTER TO BEGINNING OF STRING :RESTORE R2 815 004100 010267 174060 4\$: MOV R2,GCMPNT 004104 004110 816 010167 174052 MOV. R1.GCMLEH 012601 012602 817 MOV: (SP) + R1004112 MC A $(SP) + R2 \cdot$ 819 004114 000241 CLC 820 004116 RETURN: 821 822-004120 MOV. 012602 FSECX: (SP) + R2:RESTORE - R2 -823 004122

RETURN

824 004124

```
The second second
                         0 M1110 27-MAR-80 15:17 PAGE 21
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QMA IN .
        826
        827
        828
                                                                                                         CONVERT AN ASCII HEX VALUE FROM THE COMMAND LINE INTO BINARY
                                                                                                         LEGAL STRINGS CONTAIN FROM 1 TO 4 CHARACTERS.
        830
        831
        832
                                                                                                         R0 = NUMBER OF CHARACTERS IN ASCIT STRING
        833
                                                                                                        R1 -> STRING
        834
        835
                                                                                                                                                                                                                       1
        836
                                                                                                         THE FIELD 'BINUD' CONTAINS THE CONVERTED VALUE
        838
        839 004126
                                                                                       PACK::
        840 004126
                                  005067
                                                    173700
                                                                                                         CLR.
                                                                                                                         BINUD.
                                                                                                                                                                              :CLEAR CONVERTED WALUE FIELD
                 004132
                                  005046
                                                                                                                                                                              :CLEAR FOR COND CODE INDICATOR
        842.004134
                                                                                                        SAVE
                                                                                                                         R0.R1.R2.R3.R4.R5
        843
        844
                                                                                                         DETERMINE THE CONVERSION FACTOR (POWER OF 16) FOR
        845
                                                                                                         THE LEFTMOST ASCII CHARACTER
        846
        847
                994159
                                  022700
                                                    000004
                                                                                                        CMF
                                                                                                                          #4.R0
                                                                                                                                                                              :UPPER·LIMIT·FOR·HEX DIGITS
        848
                004154
                                  002455
                                                                                                                                                                             #ERROR EXIT:
#NUMBER OF CHARS CONTROES LOOP
                                                                                                        BLT
                                                                                                                         PSECX
        849 004156
                                  010002
                                                                                                         MOV
                                                                                                                         R0.R2
        858
                004160
                                                    000004
                                                                                                        CMP
                                                                                                                          #4,R0
                                                                                                                                                                              :4 CHARS ?
        851 004164
                                  001003
                                                                                                        BNE
                                                                                                                         1 $
        852-004166
                                  012700
                                                   010000
                                                                                                                          #4096..R0
                                                                                                                                                                             :HEX:CONVERSION:FACTOR:FOR:HIGH:ORDER:CHAR
        853 004172
                                  000416
                                                                                                        BR
                                                                                                                          4$
        854 004174
                                  022700
                                                                                                        ČMP
                                                    000003
                                                                                       15:
                                                                                                                         #3.R0
                                                                                                                                                                              #3 CHARS ?
        855 004200
                                  001003
                                                                                                        BNE
                                                                                                                         2$
                 004202
                                  012700
                                                                                                                          #256..R0
                                                   000400
                                                                                                        MOV:
                                                                                                                                                                              :CONVERSION FACTOR FOR HIGH ORDER CHAR
        857
                004206
                                  000410
                                                                                                        BR
                                                                                                                         4$
                                                                                                                                                                              :ENTER LOOPS
                                                                                                                                                                             12 CHARS: 250
        858 004210
                                  022700
                                                    000002
                                                                                       2$:
                                                                                                        CMP
                                                                                                                         #2,R0
        859 004214
                                  001003
                                                                                                        BNE
                                                                                                                         3$
        860 004216
                                  012700
                                                   000020
                                                                                                        MOV.
                                                                                                                          #16.,R0
                                                                                                                                                                              :CONVERSION, FACTOR FOR HIGH ORDER CHAR
        861 004222.
                                  000402
                                                                                                        BR
                                                                                                                         4$
        862.004224
                                  012700
                                                   000001
                                                                                       3$:
                                                                                                        MOV
                                                                                                                         #1,R0
                                                                                                                                                                              :1 CHAR-
        863
        864
                                                                                                        MULTIPLY-EACH-CHARACTER'S-VALUE-BY-ITS-CONVERSION-
        865
                                                                                                       FACTOR: THE CONVERSION FACTOR IS REDUCED BY A POWER: OF 16 AS THE ASCII STRING IS SCANNED FROM LEFT TO
        866
867
        868
                                                                                                                                                                             #MOVE-INPUT POINTER-TØ R5
#GET-ASCII VALUE-INTO-A-REG-
#POINT-TO-TRANSLATE-TABLE-
#ADD-VALUE OF-CHARACTER-
#MOVE-BINARY-VALUE-#TO-A-REG-
                                  010105
                                                                                       4$:
                                                                                                        MOV-
                                                                                                                         R1.R5
        870 004232
                                  112503
                                                                                      HLOOP:
                                                                                                        MOVB:
                                                                                                                         (R5) + .R3
        871
                004234
                                  812784
                                                   0002761
                                                                                                        MOV.
                                                                                                                         #TRTBL,R4
        872
                004240
                                  060304
                                                                                                        ADD.
                                                                                                                         R3.R4
        873 004242
                                  111401
                                                                                                        MOVB
                                                                                                                          (R4).R1
        874 004244
                                  022704
                                                   0003561
                                                                                                        CMP
                                                                                                                                                                              : WAS INPUT CHAR ZERO
                                                                                                                         #TRTBL+60,R4
        875 004250
                                                                                                                                                                             : WAS THEOLOGICAL STATE OF THE 
                                  991492
                                                                                                       BEQ
                                                                                                                         1$
                004252
                                  105701
                                                                                                        TSTB
        877
                884254
                                  001415
                                                                                                       BEO
                                                                                                                         PSECX:
        878 004256
                                 010046
                                                                                       1$:
                                                                                                        MOV
                                                                                                                         R0,-(SP)
        879 004260
                                                                                                        CALL
                                                                                                                         $MUL
        880 004264
                                 060167
                                                   173542
                                                                                                       ADD
                                                                                                                         R1.BINUD.
                                                                                                                                                                              ; ACCUM CONVERTED VALUE
        881 004270
                                 012600
                                                                                                                         (SP)+,R0
                                                                                                                                                                              :RELOAD FACTOR
        882.004272
                                 012701
                                                   000020
                                                                                                       MOV
                                                                       Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
```

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883 004276 884 004302 885 004304 886 004306 887	005302 001352 000403			;	GALL DEC BNE BR	\$DIV R2⋅ HLOOP⋅ PCLCX⋅	REDUCE FACTOR SUBSERIOR RESULTS FROM LOOP COUNT
888 004310 889 004316 890	012766	177777	000014	PSECX: PCLCX:	MOY RESTOR	#-1.12.(SP) R0.R1.R2.R3.R4.R5	;SET-COND-CODE-INDICATOR-
891 004332 892 004334 893 004336	005726 002402 000241				TST BLT CLC	(SP)+ 1\$:GET.COND.CODE.INDICATOR. :DO.SEC.
894 004340 895 004342 896 004344	000401 000261			1\$: PACKX:	BR SEC: RETHRN:	PACKX-	:AND-RETURN-

```
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QMAIN.
      898
899
                                                                           CONVERTA A VALUE FROM BINARY TO PRINTABLE FORM: R1 = WORD TO BE CONVERTED R5 -> PRINT LINE
      900
      901
902
903
      904 004346
                                                               UNPK::
      905 004346
                                                                           SAVE -
                                                                                       R0.R1.R2.R3.R4
      906
907 004360
                        062705
012702
                                     000004
                                                                                        #4,R5
                                                                                                                             DO LAST CHAR FIRST SUBSTITUTE OF HEX DIGITS FOR A WORD SUBBTN EXPECTS DIVIDEND IN RO
      908 004364
                                                                                       #4,R5
#4,R2
R1.R0
#16.,R1
$DIV
                                     000004
                                                                           MOV.
      909 004370
                         010100
      910 004372
911 004376
912 004402
                         012701
                                     000020
                                                               1$:
                                                                           MOV.
                                                                                                                              :LOAD DIVIDOR
                                                                           CALL
                                                                                                                             :POINT-TO-TRANSLATE-TABLE-
:ADD-4 BIT VALUE-
:MOVE-CHAR TO-PRINT-LINE-
:DEC-INNER LOOP-COUNT- (77
                         012703
                                     000475
                                                                           MOV.
                                                                                        #TRTBL2,R3
     913 004406
914 004410
915 004412
916 004414
                         060103
                                                                           ADD.
                                                                                        R1.R3
                         111345
                                                                           MOVB
                                                                                        (R3),-(R5)
                         005302
                                                                           DEC
BNE
                                                                                        R2-
                         001366
                                                                                        1$
      917 004416
918
919 004422
                                     000005
                                                                           ADD
                                                                                        #5,R5
                                                                                                                              ;BUMP · PRINT · LINE · PONNTER €
                                                                           RESTOR.
                                                                                       R0.R1.R2.R3.R4
      920 004434
                                                                           RETURN
```

```
MACRO M1110 27-MAR-80 15:17 PAGE 23
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922
923
 924
                                                                  WRITE · A · PRINT · LINE · TO · TTØ
925
926
927
      004436
                                                      CONSOL::
928 004436
925
929
930 004442
931 004446
994452
                                                                  SAVE
                                                                             R0.R1
                  012700
012701
122741
                              000120
                                                                  MOV
                                                                             #80..R0
#PRINT+78..R1
#40.-(R1)
                                                                                                                 PRINT-BUFFER-BYTE-COUNT-
POINT-PAST-END-OF-BUFFER-
LOOK-FOR-A-NON-BLANK-
                              000666°
000040
                                                                  MOV
                                                      1$:
                                                                  CMPB
933 004456
934 004460
                   001003
                                                                  BHE -
                                                                             2$
R0
                                                                                                                 OK, WRITE LINE
DEC CHAR COUNT
                  005300
935 004462
                  001373
                                                                  BNE
936 004464
937
                  000440
                                                                             ABEND2
                                                                                                                 ;NO·NON-BLANKS?
938 004466
939
940
                                                                 QIOW$S: #IO.WVB,#LUN;TT,#EFN:1,,#STAT,,<#PRINT-2,R0>,ABEND2
                                                      2$:
 941 004544
                  012701
112721
                              0005501
                                                                  MOV.
                                                                             #PRINT,R1
                                                                                                                :POINT:TO:STRING:
:CLEAR:LINE:TO:BLANKS:
942 · 004550
943 · 004554
944 · 004556
                              000040
                                                                             #40,(R1)+
                                                      4$:
                                                                  MOVB
                  005300
                                                                  DEC:
                                                                             RØ
                                                                                                                 ; DEC - LOOP - COUNT
                  001374
944 004556
945
946 004560
947 004564
948
                                                                 BNE
                                                                             4$
                                                                  RESTOR.
                                                                             RØ,R1
                                                                 RETURN.
 949 004566
                                                      ABEND2: ABRT$S . #MYSELF.
```

FRINGE TO LOT

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QMAIN.
     951
952
                                                             WRITE TO TTO AND PROMPT
     953
     954
                                                             REGISTERS . 0 . 1 . 2 . DESTROYED .
     955
     956
     957
                                                   ENDTST::
                                                                                                      : INC · MESSAGE · INDEX
     958
          004620
                    005267
                               173204
                               173200
                                                             INC
                                                                       ERWORD
                    885267
          994624
     959
          004630
                    005267
                               173174
                                                   EHFILE:: IHC
                                                                       ERMORD.
     960
     961
          004634
                    005267
005267
                               173170
                                                   ENDMEM:: INC
                                                                       ERWORD
                                                   STOP::
                                                                        ERWORD
                               173164
     962
          994649
                     005267
                               173160
                                                             INC
                                                                       ERMORD
     963
          004644
                                                                       ERWORD
      964
          004650
                     005267
                               173154
                                                   ERR12::
                                                             TNC
                                                   ERR11::
                                                             THE
                                                                       ERWORD.
      965
          004654
                     005267
                               173158
                                                   ERR10::
                                                                        ERWORD
                               173144
      966
          004660
                     005267
                               173140
                                                                       ERWORD
                     005267
      967
          BB4664
          004676
                               173134
                                                   ERR8::
                                                              THC
                                                                       FRUORD
      968
                                                                        ERMORD
                               173130
173124
                                                   FRR7::
                                                              THO
          004674
                     005267
                                                   ERR6::
                                                              INC
                                                                        ERWORD
      970
          004700
                     005267
                                                                        ERWORD.
      97 i
                     005267
                               173120
                                                    ERR5::
          004704
          004710
                                                    ERR4::
                                                              INC
                                                                        ERWORD
                     005267
                                                   ERR3::
ERR2::
                                                                        ERLIDED:
          004714
                     005267
                               173110
                                                              INC
                                                              INC
                                                                        ERWORD
      974 004720
                     005267
                               173104
                                                    ERR1::
                                                              INC
                                                                        ERWORD
      975
                               173100
          004724
                     005267
      976
                                                             USE-THE-INDEX.ERWORD-TO-COUNT-UP FROM-THE-BOTTOM-OF-THE MESSAGE-TABLE, FIND-THE-END-OF-THE-MESSAGE FIRST, THEN-THE-BEGINNING, THEN-GET-THE-LENGTH:
      977
      978
      979
      980
                                                                                                      :LOAD·LOOP COUNT:
:POINT·TO·END·OF·MESSAGE·TABLE
                                                                        ERWORD,R2
#ASCIZ,R1
      981
           004730
                     016702
                               173074
                                                              MOV
                                                              MOV
          . 004734
004740
                     012701
                               001665
                     105741
                                                                        -(R4)
                                                                                                      ;LOOK.FOR.END.OF.MESSAGE
                                                    1$:
                                                              TSTB
      983
      984
           004742
                                                              BNE
                                                                        1 $
                                                                                                       ;LOOP · COUNT
                                                                        R2
           004744
                     005302
                                                              DEC
                                                                                                      :BACK UP ANOTHER MESSAGE
:SAVE POINTER TO END OF MESSAGE
:BACK UP TO BEGINNING OF MESSAGE
                                                                        1$
                                                              BNE
      986
           994746
                     991374
                                                              MOV.
                                                                        R1.R0
           004750
                     010100
      987
           004752
                                                    2$:
                                                              TSTB
                                                                        -(R1)
                                                                        2$
                                                              BNE
      989 004754
                     001376
                                                                                                      :BUMP - TO - FIRST - CHAR - OF - MESSAGE
:R0 NOW - - MESSAGE - LENGTH - LITT
                                                              INC
           004756
      998
                     005201
      991
           004760
                     160100
                                                              SUB
                                                                        R1.R0
      992
                                                                        #IO.WVB, #LUN.TT, #EFN.1,, #STAT,, <R1, R0>, ABEND
                                                              QIOW$S:
      993
           004762
      994
                                                                        #EFH.1
                                                              CLEF$5
      995
           005036
                                                                                                       :GOOD RETURN
            005050
                      105767
                                172750
                                                              TSTB:
                                                                        STAT
                                                                        ABEND
                                                                                                       ; NO
                                                              BLE -
      997
           005054
                     003403
      998
                                                              CLEAR · ERROR · INDEX · AND · EXIT ·
      1000
           005056
      1001
                     005067
                                172746
                                                              RETURN.
                                                                                                       : AND RETURN
      1002 - 005062
     1003
                                                              ABRT$S.
                                                                        #MYSELF
                                                    ABEND:
     1004
           005064
                                                               .EHD
                                                                         START-
                     0021741
     1005
```

```
OMA IN.
             MACRO Mill0 27-MAR-80 15:17 PAGE 24-1
                                                  Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
 SYMBOL TABLE
             005064R
                                     BYTE22=-000026
                                                                         BYTE74= 000112
                                                                                                             DISPGS = 100000
                                                                                                                                                F.EFBK = .000010
F.EFN = .000050
 ABEND2
             004566R
                                     BYTE23= 000027
                                                                         BYTE75= 000113
                                                                                                             DMAAWR= 000005
 ALUCKE = · 040000
                                     BYTE24= 0000030
                                                                         BYTE76= 000114
BYTE77= 000115
                                                                                                             DMARRD= 000003
                                                                                                                                                F.EOBB= 000032
F.ERR = 000052
F.FACC= 000043
 ALU0E - = - 004000
                                     BYTE25= 000031
BYTE26= 000032
                                                                                                             DMARWR= 000004
 APLACE:
             000036RG
                                                                         BYTE78= 000116
 ASCIZ
AST
                                                                                                             EFBUF.
                                                                                                                         000014RG
             001665RG
                                     BYTE27 = . 000033
                                                                                                             EFN.1 = 000001 G
EFN.2 = 000002 G
                                                                         BYTE79= 000117
                                     BYTE28=-000034
BYTE29=-000035
BYTE3 =-000003
                                                                                                                                                 F.FFBY= 000014
             003652R -
                                                                         BYTE8 = 000010
 ASTFLG= 000200 G
                                                                                                                                                 F.FNAM= 000110
                                                                         BYTE80= 000120
                                                                                                             EFH.3
                                                                                                                         000003 G
                                                                                                                                                F.FNB = 000102
F.FTYP= 000116
 ASTURD
             000166RG
                                                                         BYTE81 = 000121
 AST2
                                                                                                             EFN.33= 000041 G
             003672R
                                     BYTE30= 000036
                                                                         BYTE82= 000122
BYTE83= 000123
BYTE84= 000124
                                                                                                            EFN.4 = 000004 G
ENBR = 010000
                                                                                                                                                 F.FVER= 000120
          = 010000
                                     BYTE31=.000037
BYTE32=.000040
BYTE33=.000041
                                                                                                                                                F.HIBK= 000004
 BASE -
             000034RG
 BCE: =: ****** GX:
BINWD: 00003200
                                                                                                             ENDMEM: 004634RG
                                                                                                                                                F.LUN = 0000322
F.MBCT= 000054%
F.MBC1= 000055
                                                                         BYTE85= 000125
                                                                                                            ENDTST-
                                                                                                                        004620RG
                                     BYTE34= 000042
                                                                        BYTE86=-000126
BYTE87=-000127
                                                                                                             ENFILE
                                                                                                                        004630RG
 BITVAL = . 000000
                                     BYTE35=-000043
 BIT0 = 000001
BIT1 = 000002
                                                                                                             ERR I
                                                                                                                         004724RG
                                                                                                                                                F.MBFG= 000056
                                     BYTE36= 000044
BYTE37= 000045
                                                                         BYTE88= 000130
                                                                                                             ERR10
                                                                                                                                                F.NRBD= 000024
F.NREC= 000030
F.OVBS= 000030
                                                                                                                         004660RG
 BIT1
BIT10
                                                                         BYTE89 - 000131
                                                                                                            ERR11
                                                                                                                         004654RG
         = 002000
                                     BYTE38= 000046
                                                                        BYTE9 = 000011
BYTE90= 000132
BYTE91= 000133
                                                                                                            ERR12
                                                                                                                        004650RG - 004720RG -
 BIT11 = 004000
                                     BYTE39= 000047
BYTE4 = 000004
BYTE40= 000050
                                                                                                                                                F. UVBS = N00030
F. ROCC = 000016
F. RATT = 000001
F. RCNM = 000034
F. RCTL = 000017
F. RSIZ = 000002
F. RTYP = 000000
                                                                                                             ERR2
 BIT12 -- 010000
BIT13 -- 020000
                                                                                                            ERR3
                                                                                                                         004714RG
                                                                        BYTE92= 000134
BYTE93= 000135
 BIT14 = 040000
                                                                                                                         004710RG
                                     BYTE41= 000051
                                                                                                            ERR5
 BIT15
         = 100000
                                                                                                                        004704RG
                                     BYTE42= 000052
BYTE43= 000053
                                                                         BYTE94= 000136
                                                                                                            ERR6
                                                                                                                        004700RG
 BIT2.
         = 000004
                                                                         BYTE95 = . 000137
                                                                                                            ERR7
                                                                                                                        004674RG
 BIT3
          = 000010
                                     BYTE44= 000054
                                                                        BYTE96= 000140
BYTE97= 000141
BYTE98= 000142
                                                                                                            ERR8
                                                                                                                        004670RG.
004664RG
          = .000020
                                                                                                                                                F.SEQN= 000100
                                     BYTE45= 000055
BYTE46= 000056
BYTE47= 000057
                                                                                                            ERR9
          = · 000040
= · 000100
 BIT5
                                                                                                                                                F.SPDV= 000072
                                                                                                            ERWORD .
                                                                                                                        000030RG
                                                                                                                                                F.SPUN= 000074
 BITS
                                                                        BYTE99=-000143
BYTVAL=-000144
CBKALL=-001000
                                                                                                                        002370R -
000242RG
                                                                                                                                                F.STBK=
                                                                                                                                                            000036
 BITZ
          --000200
                                    BYTE48--000060
BYTE49--000061
BYTE5 --000005
                                                                                                            FAHIGH-
                                                                                                                                                F.UNIT= 000136
 BITS
                                                                                                            FALOW-
                                                                                                                        000244RG
                                                                                                                                                F.URBD= 000020
 BIT9
          = 001000
                                                                                                            FD.CCL= ******* GX.
FD.REC= ****** GX.
FD.TTY= ****** GX.
                                                                         CBKCLK= 000400
 BLHIGH 000256PG
                                                                                                                                                F.VBN - = - 000064
                                    BYTE50= 0000062
BYTE51= 000063
                                                                         CDHIGH 000232RG
            000260RG
                                                                                                                                                F: VBSZ= 000060
 BLLOW.
                                                                        CDLOW-
                                                                                    000234RG
                                                                                                                                                GCMBLK
GCMBUF
GCMLEN
 BPTISR.
            003330R
                                                                                                                                                            001666RG
                                    BYTE52= 000064
BYTE53= 000065
                                                                                    002450RG
                                                                                                            FIND:
                                                                                                                        004010RG
 BREAK = 004000 G
BUFCX2 002750R
                                                                                                                                                            000040RG
                                                                        CMILUN= 0000002
                                                                                                            ENTH<sub>1</sub>
                                                                                                                        003732R
                                     BYTE54= 000066
                                                                                                                                                            000162RG
                                                                        CNOBRE = 100000
COMXX 002334
                                                                                                            FNMTCH-
                                                                                                                        003766R-
 BUFSET
                                                                                                                                                GCMPNT
                                                                                                                                                            000164RG
            002612RG
                                    BYTE55= 000067
BYTE56= 000070
                                                                                    002334RG
                                                                                                            FNOUT1
                                                                                                                        003724R
BUFSM-
BUFS2-
                                                                        CONSOL 004436RG
CP = ******* GX-
                                                                                                                                                GCONLY.
                                                                                                                                                            003254RG
                                                                                                            FHOUT2
                                                                                                                        003744R
            002574RG
                                                                                                                                                GE:BIF= 177775
GE:CLO= 000004
                                    BYTE57= 000071
                                                                                                            FNUM = 000006
FSECX 004120F
                                    BYTE58 = 000072
BYTE59 = 000073
BYTE6 = 000006
BYTE60 = 000074
 BUFS3
                                                                        CPCCEN=-010000
CPREAD=-040000
            002556RG
                                                                                                                      004120R
            002540RG
                                                                                                                                                GE:COM= 000001
 BUFS4
                                                                                                            FTBL.
                                                                                                                        000516R
                                                                                                                                               GE.CON= 000001
GE.CON= 000020
GE.EOF= 177766
GE.IND= 000002
GE.IOR= 177777
 BUFXX2
            002762R
                                                                        CPWRTE = . 020000
                                                                                                            F.ACTL = 000076
F.ALOC = 000040
F.BBFS = 000062
F.BDB = 000070
BYTE0 = 000000
BYTE1 = 000001
                                                                        CSADRD= 000004
                                    BYTE61= 000075
                                                                        CSEQCI=-100000
 BYTE10= 000012
                                    BYTE62= 000076
BYTE63= 000077
                                                                        CSHIGH: 000226RG
BYTE11=-000013
BYTE12=-000014
BYTE13=-000015
                                                                                                                                               GE.LC. = 000010
GE.MDE= 177774
GE.OPR= 177776
                                                                        CSLOW.
                                                                                    000230RG
                                                                                                            F.BGBC=-000057
F.BKDN=-000026
F.BKDS=-000020
                                    BYTE64= 000100
                                                                        CSOE - 000040
CSR1 002410
                                    BYTE65= 000101
                                                                                    002410RG
 BYTE14= 000016
                                                                                                                                                GE:RBG=-177730
                                    BYTE66=-000102
BYTE67=-000103
                                                                        CSWRTE = 000100
                                                                                                            F:BKEF=-000050
                                                                                                                                               GE.SIZ= 000040
G.CNLD= 000146
 BYTE15= 000017
                                                                                                           F.BKP1= 000051
F.BKST= 000024
                                                                        DATA1
                                                                                    000206RG
BYTE16= 000020
BYTE17= 000021
                                    BYTE68= 000104
                                                                        DATA2.
DATA3
                                                                                    000210RG
                                                                                                                                                G.DPRM= 000160 G.
                                    BYTE69= 000105
BYTE7 = 000007
                                                                                   000212RG-
                                                                                                            F.BKVB= 000064
BYTE18= 000022
                                                                                                                                                G.ERR - = - 000140
                                                                        DATA4
                                                                                                           F.CHR = 000075
F.CNTG= 000034
F.DFNB= 000046
BYTE19= 000023
BYTE2 = 000002
                                    BYTE70= 000106
                                                                                                                                                G.ISIZ= 000020
                                                                        DBR.RD= 000001
                                    BYTE71= 000107
                                                                                                                                               GURDLE PARASO
                                                                        DB$CPP=.001457
DB$SPT=.000026
BYTE20= 000024
                                   BYTE72= 000110
BYTE73= 000111
                                                                                                           F.DSPT= 000044
F.DVNM= 000134
                                                                                                                                               G.RSDS= 000142
G.SIZE= 000224
BYTE21= 000025
                                                                        DB$TPC= 000023
                                                  Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
```

M 0.Mili0 27-MAR-80 15:17 PAGE:24-2: OMA IN. SYMBOL TA Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3 HANG 003426RG OLDVEC 000006RG Q\$LBP - = - 000001 S\$S1 = 000010 S\$S2 - 000014 T\$RSET= 040000 T\$SC = 000022 Q\$LDCD= 000003 003512RG T\$SC = 000022 T\$SCLK = 020000 HANG2 ONCE: =:000100 G Q\$LDMD= .000004 HLHIGH. 000252RG OUT 002000 G S.BFHD= 000020 S.FATT=-000016 S.FDB-=-000140 S.FNAM=-000006 OUT1 HLLOW-000254RG 004644RG Q\$LDPP=:002000 T\$SEG1=-000000 Q\$LHP -- 010000 T\$SEG2= 0000001 T\$SEG3= 000002 HLOOP 004232R PACK 004126RG INCVAL 000200RG IO.ATA= ******** G Q\$MNC - = 140000 000200RG PACKX 004344R Q\$MR - = 000052 Q\$MRP - 000040 S.FNB -- 000036 PAR\$\$\$= 000027 T\$SO = .000001 IO:DET=-********* G PCLCX-004316R S.FNBW= 000017 T\$UBUS= 100000 Q\$MRP2= 000040 Q\$MRP2= 000240 Q\$MSC = 040000 Q\$MSET= 000004 Q\$MSP = 100000 IO:RVB= · ***** G PDATA 002764RG S.FNTY= 0000004 T\$1CLK= 000400 S.FNIY= 000004 S.FTYP= 000002 S.NFEN= 000020 TD\$CTW= 176370 TD\$STNL= 004000 TD\$MEM= 000270 TD\$OAR= 176344 TD\$OTR= 176344 IO:WVB= ******* G KILL 003564RG PDCCX 003150R T\$8BEN= 000020 003142R PDCX UBD.IN= 000020 UNPK 004346 LHH I GH -000246RG PDDX 003154R 004346RG Q\$NCLK= 176000 Q\$PP - 000100 LHL0W-000250RG PDVX 003134R UPL IM-000204RG LOADER . ABBBIAR. PLR. = 0000010 WORD0 = 000000 Q\$PPSW= 000320 Q\$PP2 = 000300 LOC:EN= 000100 PLC. = 000020 WORD1 = 000002 LOC:WA= 040000 --000030 PLD WORD10= 000024 WORD11= 000026 LOC.WB= 100000 PLRWR - = - 000200 Q\$QHLT= 000013 LOOP = 000004 G LOOPR 003404RG PLR:EN= 000200 PPCR = ******* GX** PPS = ******* GX** Q\$QL = 000043 Q\$QLA = 000053 Q\$QLB = 000054 WORD11--000020 WORD12--000030 WORD13--000032 TD\$QRD=:000274 TD\$SU-=-176376 TD\$TAR=-176372-TD\$TAW=-176362-LOOPX. 003510R WORD15--000034 WORD15--000036 WORD16--000040 WORD17--000042 LUN:TT= 000001 G MAREN1= 000001 MAREN2= 004000 Q\$0LR·= 000001 Q\$QW·= 000042 Q\$RDCD= 000005 PRDATA 003156RG PRDX. 003252R · TD\$TDR= · 176374 PRINT. 000550RG TD\$TDW=-176364 MARLOD≃ 010000 004310R Q\$RDMD=-000006 PSECX: WORD18= 000044 WORD19= 000046 WORD2 = 000004 994624RG Q\$RDMD = 000006 Q\$REBK = 001000 Q\$RSC -= 004000 Q\$RSC = 004000 Q\$RSET = 000010 Q\$SP = 10000 Q\$SP = 000340 RESEL = 002272F RGD FN = 00000 TIME . MAROUT=-000002 MAR.LO=-002000 MAR.OU=-000040 QR\$CR1=:176420 000276RG TRTBL -QR\$CR2= · 176422 QR\$LBR= · 176424 TRTBL2 TSKTCB: 000004RG WORD20= 000050 MBKALL= 001000 QXHIGH 000236RG WORD21= 000052 T\$AD - - 000020 MBKCLK= 000400 MDHIGH 000222RG WORD21=-000052 WORD22=-000056 WORD23=-000056 @XLOW-000240RG = .000002 T\$BA -Q\$ATTH= .000100 T\$BD· = 000010 T\$BSO· = 100000 T\$BT· = 000020 WORD24= 000060 WORD25= 000062 000224RG Q\$BCL - = 000001 Q\$CCCP=-000001 Q\$CCCP=-000040 Q\$CHB-=-000200 Q\$CHRL=-000200 Q\$CLR-=-000040 MEND . 000176RG 002272R RGQ.EN= 000200 RGQ.VA= 020000 RP = 001000 G RSPCNT 000202RG MMADRD= · 000100 T\$BTAR= 000030 WORD26=-000064 WORD28= 000066 WORD28= 000070 WORD29= 000072 WORD3 = 000006 MMHIGH: 000216RG T\$BTD·=·002000 T\$CD· =·000100 T\$CLK·=·002000 MMLEFT= 0000002 Q\$CNC = 030000 Q\$CP = 000060 MMLOW- 000220RG MMOE- =-000004 RTNPT -SCAN T\$DISK=.000200 T\$DRD.=.000004 000170RG MMWRTE = . 000010 Q\$CPCC=-000010 003716RG WORD30= 000074 Q\$CP2--000010 Q\$CP2--0010000 Q\$CSC--010000 Q\$CSEL--000360 Q\$CSET--000002 Q\$CSP--020000 Q\$DMA--0000001 000272RG 000274RG MHOBRE = 100000 MREN1 = 000001 SDHIGH T\$EMEM= . 010000 WORD31= 000076 WORD32= 000100 SDLOW. T\$FSAA= 000000 MREN2 - 020000 SEQ.CI=-000010 SET- 002644F SPCR- =-********** T\$FSAB = . 000004 T\$FSAC = . 000014 WORD33= 000102 002644R WORD34= 000104 = · жжжжжжж GX T\$FSB2= 000010 WORD35= 000106 = ээнжжжж БХ SPS. WORD35=-000100 WORD36=-000110 WORD37=-000112 T\$IB. = 000026 = 000040 Q\$ENBK = : 040000 5QHIGH∙ 000262RG∙ MSYN -T\$IBAR= 000024 T\$IBE - = - 020000 T\$IBF - = - 040000 MYSELF 000000RG Q\$ENOP = . 020000 000264RG SQLOW-WORD38= 000114 WORD39= 000116 WORD4 = 000010 Q\$FAL·=·004000 Q\$FC·=·000045 Q\$FO·=·000044 000266RG = 000144 SRHIGH. NEQLB = 010000 G N.DID = 000024 SRLOW. 000270RG 002174R T\$ICD - = - 000040 START: T\$MODE = . 004000 WORD40= 000120; N.DVHM= 000032 = 000046 000024RG UORD41= 000122 UDRD42= 000124 UDRD42= 000126 UORD44= 000130 STAT. T\$0B = 000036 T\$0BE = 004000 Q\$HBF·=-000002 Q\$ICP·=-000006 Q\$IHB·=-000003 H.FID -- 000000 H.FNAM- 000006 004640RG STOP 5\$CLR---000000 T\$0BF · = · 010000 M.FTYP= 000014 S\$LA - - 0000001 S\$QB - - 000005 T\$0BRA=-000034 T\$0BWA=-000032 N.FVER= 000016 Q\$IHRL= .000002 WORD45 = . 000132 N.NEXT= 000022 N.STAT= 000020 Q\$IMRP=.000007 S\$QR. = 000006 T\$0UTA= 100000 UORD46 = : 000134 O\$LBD - = -001000 = 000004 S\$QX-T\$RBD0=-000200 WORD47= 000136 N.UHIT= 000034 Q\$LBDP= 001001 S\$SP. 091001 S\$SP. = 000007 T\$RNB = 000040 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020<u>00</u>1-3 WORD48= 000140

```
QMAIN: MACRO: M1110 27-MAR-80 15:17 PAGE: 24-3
SYMBOL TABLE
                                               Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
WORD49=-000142-
WORD5 =-000012-
                                   WORD62=-000174
                                                                     WORD76=-000230
                                                                                                        WORD9 = 000022
                                                                                                                                          $CEFI·=·********* GX·
$DIV =·******* GX·
                                  WORD63= 000176
WORD64= 000200
                                                                      WORD77=-000232
                                                                                                        WORD90= 000264
WORD91= 000266
WORD92= 000270
WORD50= 000144
                                                                                                                                          $DRDSE = ******** GX****

$MUL = ********* GX***
                                                                     WORD78= 000234
WORD51= 000146
WORD52≈ 000150
                                   WORD65= 000202
                                                                     WORD79= 000236
WORD8 = 000020
                                  WORD66= 000204
WORD67= 000206
                                                                                                        WORD93=.000272
                                                                                                                                          $TKTCB= ******** GX

$$$ = 002046R
WORD53= 000152
                                                                      WORD80= 000240
                                                                                                        WORD94= 000274
WORD95= 000276
WORD54= 000154
WORD55= 000156
                                   WORD68= 000210
                                                                     WORD81 = 000242
WORD82 = 000244
                                  WORD68= 000210
WORD69= 000212
WORD7 = 000016
WORD70= 000214
WORD71= 000216
                                                                                                                                           $$$ARG= 000002
                                                                                                        WORD96= 000300
                                                                                                                                          $$$T1 = 0000027
$$$T2 = 000027
WORD56= 000160
                                                                     WORD83= 000246
                                                                                                        WORD97=-000302
WORD57= 000162
                                                                     WORD84= 000250
                                                                                                        WORD98= 000304
                                                                                                                                           .FSRCB= *****
WORD58= 000164
                                                                     WORD85 = 000252
WORD86 = 000254
                                                                                                        WORD99=-000306
WORD59=-000166
WORD6 =-000014
                                                                                                                                           .GCML1=·********** G
                                   WORD72= 000220
                                                                                                       WRDVAL = 000310
WWORDS - 000206R
                                                                                                                                          ...PC1= 001666R
...PC2= 002070R/
...PC3= 001666R
                                  WORD73= 000222
WORD74= 000224
                                                                     WORD87= 000256
WORD60= 000170
                                                                     WORD88= 000260
                                                                                                        XTREAD = . 001000
WORD61=-000172
                                   WORD75= 000226
                                                                     WORD89= 000262
                                                                                                        XTWRTE = 000400
                                                                                                                                           ...TPC= 000020
. ABS.
           000000
                           000
           005116
                           001
$$ESR1
           001020
                           002
ERRORS DETECTED:
                        0
```

VIRTUAL MEMORY USED: 7917 WORDS (31 PAGES)
DYNAMIC MEMORY: 9140 WORDS (35 PAGES)
ELAPSED TIME: 00:01:36
wMAIN,QMAIN/-SP=[20,1]IM,[20,1]QMAIN

```
CPSUB- - MACRO-M:110 27-MAR-80 14:45 PAGE-5
                                                 Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
                                                                         .ŦITLE-GRSUB
.PSECT-CPSUB
         2.000000
3
                                                                         CP SUBROUTINES
                                                                          \begin{array}{l} {\tt CONTROL} \cdot {\tt STOPE} \cdot {\tt SEQUENCING} \cdot ({\tt CONTROL} \cdot {\tt PROCESSOR}) \\ {\tt JUMP} \cdot {\tt TO} \cdot {\tt START} \cdot {\tt ADDRESS} \cdot ({\tt VIA} \cdot {\tt BRANCH} \cdot {\tt REGISTER}) \end{array} 
       10
       12
                                                                         INPUT:
                                                                                    START ADDRESS
                                                                         2(SP)
                                                                        OUTPUT:
CP SEQUENCER SET-TO-START-ADDRESS
            000000
                                                             CPSUB:
        19
           000000
                                                             SEQCS::
       20
21
                                                                         STOP - GP - AND - MRP - CLOCKS
       22
           000000
                       005046
                                                                        GLR
MOV
                                                                                     -(SP)
                                                                                                                          : CLEAR - NOTHING
       24
25
26
           000002
                        012746
                                    176000
                                                                                     #Q$NCLK,-(SP)
                                                                                                                          :SET-NO-CLOCKS
            000006
                                                                         CALL
                                                                                     CSR1
                                                                         GO TO:LOAD:MODE:(AND:CLEAR:EVERYTHING:ELSE)
       28
       29
30
31
           000012 005067
                                                                                     QR$GR2.
                                                                                                                          :DO-IT
                                                                         SELECT BRANCH REGISTER IN CP.
       32
       33
           000016
                       005046
                                                                         CLR.
                                                                                     -(SP)
                                                                                                                          ; DEFINE BR REG SELECT
           000020
                                                                         CALL
                                                                                    CPCRA-
                                                                                                                          : WRITE · CR · (WITHOUT · AUTOMATIC · BR · INHIBIT)
       35
       36
                                                                         GLOCK-CP-ONCE-
       37
38
           000024
000030
                       012746
                                    ӨЗӨӨӨ
                                                                                     #Q$CNC,-(SP)
                                                                                                                         :CLEAR · CP · NO · CLOCKS · :SET · CP · SINGLE · CLOCK
                       012746
                                                                                     #Q$CSP,-(SP)
                                    020000
                                                                         MOV.
       40
           000034
                                                                        CALL
                                                                                     CSR 1
       41
       42
                                                                        MOVE · INSTRUCTION · AND · ADDRESS · TO · BRANCH · REGISTER · VIA · LOAD · BUS · ISSUE · CLOCK · TO · PUT · START · ADDRESS · CONTENTS · AT · INPUTS · TO · PLR ·
       43
       44
       45
           000040
000046
                       052766
                                    020000
                                                000002
                                                                                    #BIT13,2(SP)
2(SP),-(SP)
LBCP
                                                                        BIS
                                                                                                                         :OR.JMP.INSRUCTION.(02) INTO HIGH-ORDER NIBBLE:
:COPY-ARGUMENT-INTO STACK FOR LECP-CALL:
:DO-MOVE-- ISSUE-CLOCK:
       46
                       016646
                                    000002
                                                                         MOV.
       47
           000052
                                                                        CALL
       48
      49 000056
50 000062
                       011666
005726
                                   000002
                                                                                     (SP),2(SP)
                                                                                                                         :MOVE-RETURN-ADDRESS DOWN-STACK-
:POINT-TO-RETURN-ADDRESS-
      50 000062
51 000064
                                                                         TST.
                                                                                     (SP) +
                                                                        RETURN.
```

THE PROPERTY OF

. 13'

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CPSUB- . . M
                O M1110 27-MAR-80 14:45 PAGE 6
Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
      53
54
55
56
                                                                     \begin{array}{l} {\tt CONTROL \cdot STORE \cdot SEQUENCING \cdot (CONTROL \cdot PROCESSOR)} \\ {\tt SET \cdot START \cdot ADDRESS \cdot FOR \cdot WRITE} \end{array} 
      57
58
59
60
                                                                    INPUT:
                                                                    2(SP)
                                                                               START-ADDRESS
                                                                    OUTPUT-
      61
62
63
64
                                                                    CP SEQUENCER SET TO START ADDRESS
           000066
                                                        ŴRTCS::
                                                                    STOP · GP · AND · MRP · CLOCKS
       66
          000066
000070
       67
                      005046
                                                                    CLR
                                                                               -(SP)
                                                                                                                 : CLEAR - NOTH ING
       68
                      012746
                                 176000
                                                                    MOV.
                                                                               #Q$NCLK,-(SP)
                                                                                                                 :SET-NO-CLOCKS
      69
70
71
72
73
           000074
                                                                    GO TO:LOAD:MODE:(AND:CLEAR:EVERYTHING:ELSE)
           000100
                    005067
                                 176422
                                                                    CLR-
                                                                               QR$CR2
                                                                                                                 :DO:IT
      74
75
76
                                                                    SELECT-BRANCH-REGISTER IN-CP-
           000104
                      005046
                                                                                                                 :DEFINE BR REG SELECT: -:
:WRITE CR (WITHOUT AUTOMATIC BR INHIBIT)
                                                                    CLR -
      78
79
           000106
                                                                    CALL.
                                                                               CPCRA-
      80
81
                                                                    GLOCK-GP-ONCE
      82 000112 012746
83 000116 012746
84 000122
                                 030000
                                                                    MGV.
                                                                               #Q$CMC,-(SP)
                                                                                                                 :CLEAR · CP · NO · CLOCKS ·
                                 020000
                                                                    MOV.
                                                                               #Q$CSP,-(SP)
                                                                                                                 :SET-CP-SINGLE-CLOCK
                                                                    CALL
      85
      86
87
                                                                   MOVE INSTRUCTION AND ADDRESS TO BRANCH REGISTER VIA LOAD BUS
      88
          000126
                      052766
                                 020000
                                             ининия.
                                                                    BIS.
                                                                               #BIT13,2(SP)
                                                                                                                 ;OR.JMP.INSRUCTION.(02) INTO-HIGH-ORDER.NIBBLE;
;COPY-ARGUMENT-INTO-STACK-FOR.LBCP.CALL;
;DO-MOVE-- FIRST-CLOCK-
      89 000134
                      016646
                                 000002
                                                                               2(SP),-(SP)
LBCP
                                                                    MOV
      90
          000140
                                                                    CALL:
      91
      92.000144
                                                                    RETURN.
```

```
CPSUB MACRO M: 110 27-MAR-80 14: 45 PAGE 7 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
      95
96
97
                                                                DATA · TRANSFER
                                                                LOD BUS REGISTER TO A DESTINATION ON THE CP BUS
      98
                                                                INPUT:
      99
                                                                2(SP)
                                                                           DATA FOR PRE-SELECTED CP DESTINATION .
     100
     101
          000146
                                                      LBCP::
          000146
                     016667
                                000002.
                                          176424
                                                                MOV
                                                                                                           :MOVE-DATA TO-LOD-BUS-REG
:CLR-DRIVE AND-PULSE
                                                                           2(SP),QR$LBR
                     012746
052716
012746
     103
          000154
                                001001
                                                                MOV.
                                                                           #<Q$LBD+Q$LBP>,-(SP)
#<Q$CSEL>,(SP)
#<Q$NCLK>,-(SP)
     104 000160
                                000360
                                                                BIS
                                                                                                           CLR-SELECTION-BITS-
SET-NO-CLOCKS-
SELECT-CP
          000164
     105
                                176000
                                                                MOV.
     106
107
          000170
                     052716
                                000260
                                                                BIS.
                                                                           #Q$CP2,(SP)
CSR1
          000174
                                                                CALL
     108
          000200
     109
                     012746
                                азавав
                                                                MOV.
                                                                           #Q$CNC,-(SP)
                                                                                                           ;CLEAR·CP·NO+CLOCK·BITS
;SET·CP·CLOCK·
          000204
                     012746
                                021000
                                                                MOV.
                                                                           #<Q$CSP+Q$LBD>,-(SP)
     111 000210
                                                                CALL
                                                                           CSR1
                                                                                                                                               Patrician.
     112
113
                                                                DE-SELECTION
     114
     115
                     012746
052716
012746
          000214
                                001001
                                                                           #<Q$LBD+Q$LBP>,-(SP)
#<Q$CSEL>,(SP)
#<Q$NCLK>,-(SP)
                                                                MOV
                                                                                                           :CLEAR DRIVE AND PULSE CLR SELECTION BITS
     116 000220
117 000224
                                000360
                                                                BIS
                                176000
                                                                MOV
                                                                                                            :SET-NO-CLOCKS
          000230
                                                                CALL
     119
     120 000234
                     011666
                                000002
                                                                MOV.
                                                                           (SP),2(SP)
                                                                                                           :MOVE-RETURN-ADDRESS DOWN-STACK-
:POINT-TO-RETURN-ADDRESS-
          000240
                     005726
                                                                TST.
RETURN.
     122.000242
```

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```
O M1110 27-MAR-80 14:45 PAGE 8
Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
CPSUB- . . M
     125
                                                              DATA · TRANSFER
     126
127
                                                              LOD BUS REGISTER TO A DESTINATION ON THE CP BUS
                                                              SINGLE CLOCK SEQUENCER ONLY.
     128
     129
                                                              INPUT:
     130
                                                                        DATA FOR PRE-SELECTED CP DESTINATION
                                                              2(3P)
     131
     132
          000244
                                                    LBCSC::
          000244
                    016667
                               000002
                                         176424
                                                                                                       :MOVE-DATA TO-LOD-BUS-REG: :CLR-DRIVE AND-PULSE :CLR-SELECTION-BITS-:SET-NO-CLOCKS-
                                                              MOV
                                                                         2(SP).QR$LBR
                                                                        2(3P), UK$LEK:
#<Q$LBD+Q$LBP}, -(SP)
#<Q$CSEL>,(SP)
#<Q$NCLK>,-(SP)
#Q$P2,(SP)
     134
         000252
000256
                    012746
052716
012746
                               001001
                                                              MOV.
     135
                               000360
                                                              BIS
          000262
                               176000
                                                              MOV
     137
          000266
                    052716
                               000260
                                                              BIS
                                                                                                        :SELECT CP
     138
         000272
                                                              CALL
     139
     140
          000276
                    012746
                               030000
                                                                         #Q$CNC,-(SP)
#(Q$CSC+Q$LBD>,-(SP)
                                                              MOV.
                                                                                                        :CLEAR · CP · NO+CLOCK · BITS ·
     141 000302
142 000306
                    012746
                                                              MOV.
                                                                                                        :SET-CP-CLOCK-
                                                              CALL
                                                                         CSR1
                                                                                                                                        Transport of the
     144
145
                                                              DE-SELECTION
     146
          000312
                    012746
                               001001
                                                                                                        :CLR.DRIVE AND.PULSE
:CLR.SELECTION.BITS.
                                                              MOV
                                                                         #<Q$LBD+Q$LBP>.-(SP)
     147
          000316
                    052716
                               000360
                                                              BIS
                                                                         #<Q$CSEL>.(SP)
     148
          888322
                    012746
                               176000
                                                              MOV.
                                                                         #<Q$NCLK>,−(SP)
                                                                                                        :SET-NO-CLOCKS
     149
          000326
                                                              CALL
     151
          000332
                    011666
                               000002
                                                              MOV-
                                                                         (SP),2(SP)
                                                                                                        :MOVE RETURN ADDRESS DOWN STACK
     152 · 000336
153 · 000340
                    005726
                                                              TST
                                                                         (SP) +
                                                                                                        *POINT TO RETURN ADDRESS
                                                              RETURN.
                                                                                                                                     T.,
```

```
156
157
158
159
                                                  DATA TRANSFER TO LOD BUS REG FROM CP
                                                  OUTPUT:
                                                  (SP)
                                                           DATA FROM PRE-SELECTED CP SOURCE
160
                                         CPLB::
```

CPSUB----MACRO-M1110 27-MAR-80 14:45 PAGE-9 Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3

161 000342 162-000342 012746 052716 012746 CLR.DRIVE AND.PULSE CLR.SELECTION.BITS. SET.NO-CLOCKS. SOURCE.IS CP. 001001 MOV-#<Q\$LBD+Q\$LBP>,-(SP) 163 000346 000360 #<Q\$CSEL>.(SP) #<Q\$NCLK>.-(SP) BIS 164 000352 176000 MÔV 165 000356 166 000362 052716 000260 BIS #Q\$CP2,(SP) CSR1 (SP),-(SP) QR\$LBR,2(SP) CALL 167 000366 011646 MOV. :MOVE-RETURN-ADDR-UP STACK-:MOVE-DATA ONTO-STACK-168 000370 169 016766 176424 000002 170 000376 012746 MOV. CLR. 000260 #Q\$CP2,-(SP) -(SP) :CLEAR · CP · SELECT 171 000402 172 000404 173 000410 005046 ; SET · NOTH ING · CALL RETURN.

```
CPSUB- . . M
               0.M1110 27-MAR-80 14:45 PAGE-10
                                           Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
     175
176
177
178
179
                                                               CP CONTROL REGISTER LOADING
                                                               INFUT:
     180
                                                                         \texttt{BIT-SETTING-FOR-CP-CONTROL-REGISTER-}
                                                               2(SP)
     181
          000412
                                                    ĆPCR:∶
     183
          000412
                     052766
                                100000
                                          000002
                                                               BIS
                                                                         #CHOBREG,2(SP)
                                                                                                         :AUTOMATIC INHIBIT OF BRANCH REGISTER
     184 000420
     185
          000420
                     016667
012746
052716
                               000002
                                          176424
                                                               MOV-
                                                                         2(SP),QR$LBR
                                                                                                        :CONTROL BITS DESTINED FOR CP
:CLEAR DRIVE AND PULSE
:CLR SELECTION BITS
:SELECT CP
          000426
                               001001
     186
                                                                         #<Q$LBD+Q$LBP>,-(SP)
#<Q$CSEL>,(SP)
                                                               MOV.
     187
          000432
                               000360
                                                               BIS
          000436
     188
                     012746
                               000060
                                                               MOV-
                                                                          #0$CP,-(SP)
          000442
                                                               CALL
                                                                         CSR1
     198
     191
          000446
000450
                     005046
                                                               CLR-
                                                                          -(SP)
                                                                                                         :CLEAR · NOTHING
:SET · PULSE
                     012746
                               000001
                                                               MOV.
                                                                          #Q$LBP,-(SP)
     193
          000454
                                                               CALL
                                                                         CSR1
     194
     195
          000460
                     012746
                               000061
                                                                         #<Q$CP+Q$LBP>,-(SP)
                                                               MOV.
                                                                                                         :CLEAR · CR · SELECTION · AND · PULSE
:SET · NOTHING ·
     196
197
          000464
                     005046
                                                               CLR CALL
                                                                          -(SP)
          000466
                                                                         CSR1
     198
     199 000472
                     011666
                               000002
                                                                                                         :MOVE-RETURN-ADDRESS DOWN-STACK;
:POINT-TO-RETERN ADDRESS
                                                               MOV.
                                                                          (SP),2(SP)
     200 000476
201 000500
202
                     005726
                                                               TST.
                                                                          (SP) +
                                                               RETURN.
     203
                     000001
                                                               .END
```

```
CPSUB---MACRO-M1110 27-MAR-80 14:45 PAGE-10-1
SYMBOL . TABLE
                                                       Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
                                        BYTE42=-000052-
BYTE43=-000053
                                                                                 BYTE94= 000136
                                                                                                                         PLR.EN= 000200
ALUCKE = . 040000
                                                                                                                                                                  Q$RNC - - 006000
ALUŌE - 004000
A01 = 010000
                                                                                                                         QR$CR1= 176420
QR$CR2= 176422
                                                                                 BYTE95= 000137
                                                                                                                                                                 Q$RSC - = -004000
                                                                                                                                                                 0$RSET= 000010
                                        BYTE44= 000054
                                                                                 BYTE96= 000140
BITYAL = 000000
BIT0 = 000001
BIT1 = 000002
                                                                                                                                                                 Q$SP = 000120
                                        BYTE45= 000055
BYTE46= 000056
                                                                                 BYTE97 = . 000141
                                                                                                                         QR$LBR= · 176424
                                                                                                                         Q$ATTN= 000100
Q$BCL = 000001
Q$CCCP= 000040
                                                                                 BYTE98=-000142
                                        BYTE47 = . 000057
                                                                                 BYTE99= · 000143
                                                                                                                                                                 Q$SP2 - 000340
BIT10 = 002000
BIT11 = 004000
BIT12 = 010000
                                        BYTE48≈.000060
                                                                                 BYTVAL = . 000144
                                                                                                                                                                 RGQ:EN= 000200
RGQ:VA= 020000
                                                                                                                         Q$CHB·=·000400
Q$CHRL=·000200
Q$CLR·=·000040
                                        BYTE49 = 000061
BYTE5 = 000005
                                                                                 CBKALL = 001000
CBKCLK = 000400
                                                                                                                                                                 SEQCS 000000
SEQ.CI= 000010
                                                                                                                                                                               000000RG
BIT13 = 020000
BIT14 = 040000
BIT15 = 100000
                                        BYTE50= 000062
                                                                                 CHOBRE = 100000
                                        BYTE51 = . 000063
                                                                                 CPCCEN= 010000
CPCR 000412
                                                                                                                  Q$CNC -- 030000
002 Q$CP -- 000060
002 Q$CPC -- 000010
                                                                                                                                                                  S$CLR∙=∙000000
                                        BYTE52= 000064
                                                                                              000412RG
                                                                                                                                                                  S$LA =
BIT2 = 000004
BIT3 = 000010
                                        BYTE53= 000065
                                                                                 CPCRA-
                                                                                              000420RG
                                                                                                                                                                          = · 000005
= · 000006
                                                                                                                                                                 S \# \Omega B
                                                                                                                  002 Q$CP2 = 000260
Q$CSC = 010000
002 Q$CSEL = 000360
                                        BYTE54= 000066
BYTE55= 000067
BIT3
                                                                                 CPLB.
                                                                                              000342RG
                                                                                                                                                                  S$QR
                                                                                 CPREAD= 040000
CPSUB 000000R
          = .000020
BIT4
                                                                                                                                                                 S$QX
                                                                                                                                                                           = 000004
         = 000040
= 000100
= 000200
                                        BYTE56= 000070
                                                                                                                                                                          = 000007
= 000010
                                                                                                                                                                 9$9R
                                        BYTE57= 000071
BYTE58= 000072
BIT6
                                                                                 CPWRTE = - 020000
                                                                                                                         Q$CSET= .000002
                                                                                                                                                                 S$S1
                                                                                CSADRD= 000000
CSEQCI= 100000
CSOE = 000040
CSR1 = ********* GX-
                                                                                                                         Q$CSP.=.020000
Q$DMA.=.000001
BIT7
                                                                                                                                                                           = 000014
                                        BYTE59= 000073
BYTE6 = 000006
                                                                                                                                                                 TD$CTR= 176376
TD$CTW= 176366
TD$INL= 004000
TD$TEM= 000270
BIT8
          = 000400
BIT9 = 001000
BYTE0 = 000000
                                                                                                                         Q$ENBK = . 040000
                                        BYTE60=-000074
                                                                                                                         Q$ENOP= 020000
BYTE1 = 000001
                                                                                 CSWRTE = 000100
DBR.RD = 000001
                                        BYTE61= 000075
                                                                                                                         Q$FAL -- 004000
BYTE10= 000012
                                        BYTE62= 000076
                                                                                                                         Q$FC: =:000045
                                                                                                                                                                  TD$0AR= 176344
BYTE11= 000013
                                        BYTE63= 000077
                                                                                 DB$CPP= 001457
                                                                                                                         Q$F0 = 000044
Q$FP = 000046
                                                                                                                                                                  TD$OTR=:176346
BYTE12= 000014
                                         BYTE64= 000100
                                                                                 DB$SPT= 000026
                                                                                                                                                                 TD$QRD= · 000274
TD$SW ·= · 176376
                                                                                                                         Q$FP = 000046
Q$HBF = 000002
Q$ICP = 000003
Q$IHB = 000003
Q$IHRL = 000002
Q$IMRP = 000007
BYTE13=:000015
                                        BYTE65= 000101
                                                                                 DB$TPC=-000023
BYTE14= 000016
                                        BYTE66 = 000102
BYTE67 = 000103
                                                                                 DISPGS=-100000
DMAAWR=-000005
                                                                                                                                                                  TD$TAR= · 176372
BYTE15= 000017
                                                                                                                                                                  TD$TAW= 176362
BYTE16= 000020
BYTE17= 000021
                                         BYTE68= 000104
                                                                                 DMARRD = . 000003
                                                                                                                                                                  TD$TDR= 176374
                                        BYTE69=-000105
BYTE7 =-000007
BYTE70=-000106
                                                                                 DMARWR= - 000004
                                                                                                                                                                  TD$TDW= 176364
BYTE18= 000022
                                                                                                                  Q$LBD -- 001000
002 · Q$LBDP -- 001001
002 · Q$LBP -- 000001
                                                                                 ENBR - 010000
LBCP 000146
                                                                                                                                                                  T$AD = 000020
T$BA = 000002
T$BD = 000010
BYTE19=-000023
BYTE2-=-000002
                                                                                              000146RG
000244RG
                                        BYTE71= 000107
BYTE72= 000110
BYTE73= 000111
BYTE74= 000112
                                                                                 LBCSC -
                                                                                                                                                                  T$BD
BYTE20= 000024
BYTE21= 000025
                                                                                 LOC.EN=-000100
LOC.WA=-040000
LOC.WB=-100000
                                                                                                                                                                  T$850 = 000010
T$850 = 100000
T$8T = 000020
T$8TAR = 000030
                                                                                                                         Q$LDCD= 000003
                                                                                                                         Q$LDMD=:000004
Q$LDPP=:002000
 BYTE22= 0000026
                                                                                                                         Q$LHP = 002000
Q$LHP = 010000
Q$MNC = 140000
Q$MR = 000052
Q$MRP = 000040
BYTE23= 0000027
                                         BYTE75= 000113
                                                                                 MAREN1 = . 000001
                                                                                                                                                                 T$BTD - = 002000
T$CD = 000100
T$CLk - = 002000
                                        BYTE76=-000114
BYTE77=-000115
BYTE78=-000116
                                                                                 MAREN2= 004000
MARLOD= 010000
MAROUT= 000002
BYTE24= 000030
BYTE25= 000031
BYTE26=-000032
                                                                                                                                                                  T$DISK= 000200
T$DRD = 000004
                                                                                                                         Q$MRP2= 000240
BYTE27 = - 000033
                                         BYTE79=-000117
                                                                                 MAR.LO= 002000
BYTE28=:000034
                                        BYTE8 = .000010
BYTE80 = .000120
                                                                                 MAR.OU= 000040
                                                                                                                         Q$MSC - = - 040000
                                                                                                                                                                  T$EMEM= 010000
BYTE29=-000035
BYTE3 =-000003
                                                                                                                         Q$MSET= 000004
Q$MSP-= 100000
Q$MCLK= 176000
Q$PP- = 000100
Q$PPSW= 000320
Q$PP2-= 000300
                                                                                 MBKALL = . 001000
MBKCLK = . 000400
                                                                                                                                                                  T$FSAA= · 000000
T$FSAB= · 000004
T$FSAC - · 000014
                                         BYTE01= 000121
BYTE30= 000036
BYTE31= 000037
                                         BYTE92=-000122
                                                                                 MMADRD = . 000100
                                                                                                                                                                  T$ SB2 = 000010 ; ; ; 
T$ IB = 000026
T$ IBAR = 000024
                                         BYTE03=:000123
                                                                                 MMLEFT= 000002
MMOE = 000004
 BYTE32=-000040
                                         BYTE84= · 000124
 BYTE33= 000041
                                         BYTE05=:000125
                                                                                 MMWRTE = . 000010
                                                                                                                         Q$QHLT= 0000013
Q$QL = 000043
Q$QLA = 000053
Q$QLB = 000054
                                                                                                                                                                  T$IBE:=:020000
T$IBF:=:040000
                                        BYTE86=-000126
BYTE87=-000127
BYTE34= 000042
                                                                                 MH0BRE = . 100000
BYTE35= 000043
                                                                                 MREN1 = 000001
MREN2 = 020000
 BYTE36= 000044
                                         BYTE88= .000130
                                                                                                                                                                  T$ICD - = -000040
BYTE37 - 000045
BYTE38 - 000046
                                        BYTE09= 000131
BYTE9 = 000011
                                                                                 MSYN - 000040
                                                                                                                                                                  T$MODE = 004000
T$OB = 000036
                                                                                          = · 000144
= · 000010
= · 000020
                                                                                                                         Q$QLR -- 000001
                                                                                 PLB
BYTE39= 000047
                                        BYTE90= 000132
                                                                                                                         Q$QW- =-000042
                                                                                                                                                                 T$08E 004000
T$08E 01000000
                                                                                                             Q$RD(D) = 0000045
Q$RD(D) = 000005
Q$REBK = 001000
C$REBK = 001000
CIA-RDP85-00514R000200020001-3
                                                                                                                                                                                                Jakob Co
BYTE4 = .000004
                                        BYTE91 = . 000133
                                                                                 PLC.
BYTE40= 000050
BYTE41= 000051
                                        BYTE92=-000134
                                                                                 PLD· = 000030
PLRWR· = 000200
                                                                                                                                                                  T$0BRA=-000034 A
T$0BWA=-000032
                                        BYTE93 = . 000135
                                                       Approved For Release 2005/07/12
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CPSUB- · · M O-M1110 27-MAR-80 14:45 PAGE-10-2-SYMBOL TA Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3 T\$DUTA=: 100000 WORD18= 000044 WORD4 = 000010 WORD61=-000172 WORD82=-000244 WORD83=-000246 T\$RBDO=-000200 T\$RNB-=-000040 WORD19= 000046 WORD2 = 000004 WORD40= 000120 WCRD41= 000122 WORD62=-000174 WORD63= 000176 WORD64= 000200 WORD84= 000250 T\$RSET= 040000 T\$SC · = 000022 WORD20=-000050 WORD42= 000124 WORD85= 000252 WORD86= 000254 WORD87= 000256 WORD21=-000052 WORD22=-000054 WORD23=-000056 WGRD43= 000126 WORD65= 000202 T\$SCLK=-020000 WORD44= 000130 WORD66= 000204 T\$SEG1=-000000 WCRD45= 000132 WORD67= AAA2A6 WORD88= 000260 T\$SEG2= 000001 WORD24= 000060 WORD25= 000062 WORD46= 000134 WORD68 = . 000210 WORD89= 000262 WORD9 = 000022 T\$SEG3= 000002 WORD69 = 000212 WORD7 = 000016 WORD47= 000136 T\$SO - - 000001 WORD48= 000140 WORD26 = - 000064 WORD90= 000264 T\$UBUS= · 100000 T\$1CLK= · 000400 WORD27= 000066 WORD49=-000142 WORD70= 000214 WORD71= 000216 WORD91= 000266 WORD92= 000270 WORD28=-000070 WORD5 - 000012 WORD29= 000070 WORD29= 000072 WORD3 = 000006 T\$8BEN= 000020 WORD50= 000144 WORD51= 000146 WORD72=-000220 WORD93= 000272 UBD.IN= 000020 WORD0 = 000000 WORD1 = 000002 WORD73= 000222 WORD74= 000224 WORD94= 000274 WORD95= 000276 WORD96= 000300 WORD30=-000074 WORD31=-000076 WORD32=-000100 WORD52= 000150 WORD53=-000152 WORD75 = . 000226 WORD 10 = . 000024 WORD76=-000230 WORD77=-000232 WORD78=-000234 WORD54= 000154 WORD55= 000156 WORD97= 000302 WORD11=-000026 WORD33=-000102 WORD98= 000304 WORD12= 000030 WORD13= 000032 WORD34= 000104 WORD56= 000160 WORD99= 000306 WORD35= 000106 WORD57=-000162 WORD79= 000236 WRDVAL = . 000310 WORD14= 000034 MORD36= 000110 WORD58=-000164 WORD8 - 000020 WRTCS -000066RG 992 WORD59= 000166 WORD15=-000036 WORD37= 000112 WORD80=.000240 XTREAD = . 001000 WORD15 - 000030 WORD16 - 000040 WORD17 - 000042 WORD38= 000114 WORD6 = 000014 WORD81=-000242 XTWRTE = . 000400 WORD39--000116 WORD60 - 000170 . ABS: 000000 999 000000 001 CPSUB-000502 002 ERRORS . DETECTED: Ø

VIRTUAL·MEMORY·USED: 3021 WORDS· (·12·PAGES) DYNAMIC·MEMORY: 3860 WORDS· (14 PAGES) ELAPSED·TIME: 00:00:43

CPSUB, 6PSUB/-SP=[20,1]IM,[20,1]CPSUB.

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Approved For Release 2005/07/11 CIA-RDP85-00514R000200020001-3
MRPSUB- M
                                                             . FITLE - MRPSUB - -
                                                             .PSECT MRPSUB
         000000
      234567891011
                                                            MRP · SUBROUTINES ·
                                                            CONTROL STORE SEQUENCING (MATCH REPORT PROCESSOR)
JUMP TO START ADDRESS (VIA BRANCH REGISTER)
                                                             INPUT:
                                                                      START-ADDRESS-
       13
                                                             OUTPUT:
       15
                                                             MRP - SEQUENCER - SET - TO - START - ADDRESS -
       16
17
                                                   MRPSUB:
          000000
                                                   SEQMM::
       19
          000000
       20
                                                             STOP - CP - AND - MRP - CLOCKS
       21
       22
23
24
25
26
27
28
29
          000000 005046
000002 012746
                                                                       -(SP)
                                                                                                     :CLEAR · NOTHING ·
                                                             CLR.
                    012746
                               176000
                                                                                                     :SET-NO-CLOCKS-
           000006
                                                             CALL:
                                                             GO TO-LOAD-MODE-(AND-CLEAR-EVERYTHING-ELSE)
                                                                                                     :DO:IT:
           000012 005067
                                                             CLR
                                                                       QR$GR2:
       30
                                                             SELECT-BRANCH-REGISTER IN-MRP-
       31
32
                                                                                                     :DEFINE BR REG SELECT::WRITE CR (WITHOUT AUTOMATIC BR SUPPRESS)
                                                                       -(SP)
           000016
                    005046
                                                             CLR:
       34
35
36
                                                                       MRPCRA-
           000020
                                                             CALL:
                                                             GLOCK - MRP - ONCE
       37
                                                                                                     ;CLEAR MRP NO CLOCKS
                     012746
012746
                                                             MOV
                                                                       #Q$MNC,-(SP)
           000024
                               140000
                                                                       #Q$MSP,-(SP)
                                                                                                     ;SET-MRP-SINGLE-CLOCK-
       39
40
                                                             MOV.
           000030
                               100000
           000034
                                                             CALL
       41
                                                             MOVE INSTRUCTION AND ADDRESS TO BRANCH REGISTER VIA LOAD BUS
       42
       43
                                                                                                     :OR.JMP.INSRUCTION.(02) INTO.HIGH.ORDER.NIBBLE.
:COPY.ARGUMENT.INTO.STACK.FOR.LBMRP.CALL
:DO.MOVE.- FIRST.CLOCK.
                                                                       #BIT13,2(SP)
                                         000002
       44 000040
45 000046
                     052766
                               020000
                                                                       2(SP).-(SP)
LBMRP
                     016646
                                                             MO,V-
                               000002
           000052
                                                             CALL:
        47
                                                                                                      ; MOVE · RETURN · ADDRESS DOWN · STACK ·
                                                             MOV-
                                                                        (SP).2(SP)
                     011666
                               000002
       48 000056
                                                                                                      ; POINT TO RETURN ADDRESS
                                                             TST.
RETURN.
           000062
                     005726
                                                                        (SP) +
        50 000064
```

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MRPSUB- MACRO-M1110 27-MAR-80 15:12 PAGE-6
                                                Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
       52 · 53 · 54 · 55 · 57 · 58 · 59 · 60 · 61 · 62 · 000066 · 63 · 64 · 65
                                                                     CONTROL - STORE - SEQUENCING - (MATCH - REPORT - PROCESSOR)
SET - START - ADDRESS - FOR - WRITE -
                                                                      INPUT:
                                                                      2(SP)
                                                                                 START-ADDRESS-
                                                                      OUTPUT -
                                                                      MRP · SEQUENCER · SET · TO · START · ADDRESS ·
                                                          ÚR™::
                                                                      STOP - GP - AND - MRP - CLOCKS
       65
66
           000066
                       005046
                                                                      OLR:
                                                                                 -(SP)
                                                                                                                    ;CLEAR·NOTHING
;SET·NO·CLOCKS
       67
            000070
                                                                      MOV.
                       012746
                                                                                 #0$NCLK,-(SP)
       68
69
           000074
       70
                                                                      GO TO:LOAD:MODE:(AND:CLEAR:EVERYTHING:ELSE)
           000100
                       005067
                                   176422
                                                                      CLR
                                                                                 QR$GR2
                                                                                                                    :DO-IT
       74
75
76
77
                                                                      SELECT-BRANCH-REGISTER IN-MRP-
           000104
                       005046
                                                                      GLR
                                                                                 -(SP)
                                                                                                                    ; DEFINE BR REG - SELECT
            000106
                                                                      CALL
                                                                                 MRPCRA
                                                                                                                    :WRITE-CR-(WITHOUT AUTOMATIC-BR-INHIBIT)
       78
79
                                                                      GLOCK - MRP - ONCE
        80
            000112
                       012746
                                   140000
                                                                      MOV-
                                                                                 #Q$MNC,-(SP)
                                                                                                                    ;CLEAR·MRP NO·CLOCKS
                                                                                                                    ;SET.MRP.SINGLE.CLOCK.
        82.000116
                       012746
                                   100000
                                                                      MOV.
                                                                                 #Q$MSP,-(SP)
        83
           000122
                                                                      CALL
                                                                                 CSR1
        84
                                                                      \texttt{MOVE} \cdot \texttt{INSTRUCTION} \cdot \texttt{AND} \cdot \texttt{ADDRESS} \cdot \texttt{TO} \cdot \texttt{BRANCH} \cdot \texttt{REGISTER} \cdot \texttt{VIA} \cdot \texttt{LOAD} \cdot \texttt{BUS}_{2...}^{\text{COLUMBERS}}
        85
        86
                                                                                                                    :OR.JMP.INSRUCTION.(02) INTO HIGH-ORDER NIBBLE.
:COPY-ARGUMENT-INTO STACK-FOR LBMRP.CALL
        87
            000126
                       052766
                                   020000
                                              000002
                                                                      BIS
                                                                                 #BIT13,2(SP)
           000134
                                                                                 2(SP),-(SP)
LBMRP
        88
                       016646
                                   000002.
                                                                      MOV-
        89
           000140
                                                                      CALL
                                                                                                                    :DO:MOVE:- FIRST:CLOCK
                                                                                                                    :MOVE-RETURN-ADDRESS DOWN-STACK
:POINT-TO-RETURN-ADDRESS-
        91
            000144
                       011666
                                   000002
                                                                      MOV.
                                                                                 (SP),2(SP)
        92.000156
                       005726
```

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0 M1110 27-MAR-80 15:12 PAGE 7
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MRPSUB- M
      94
95
96
                                                           DATA · TRANSFER
                                                           LOD-BUS-REGISTER-TO-A-DESTINATION-ON-THE-MRP-BUS
      97
      98
                                                           INPUT:
      99
                                                                     DATA FOR PRE-SELECTED MRP DESTINATION
     100
     101
         000152
                                                 LBMRP::
                   016667
012746
052716
                                                                                                  ;MOVE-DATA TO-LOD-BUS-REG-
;CLR-DRIVE AND-PULSE
;CLR-SELECTION-BITS-
;SET-NO-CLOCKS-
     102-000152-
                             000002
                                       176424
                                                           MOV:
                                                                     2(SP),QR$LBR
     103 000160
                             001001
                                                           MOV.
                                                                     #<Q$LBD+Q$LBP>,-(SP)
     104 000164
                                                           BIS:
                             000360
                                                                     #<Q$CSEL>,(SP)
#<Q$NCLK>,-(SP)
     105 000176
106 000174
                   012746
                              176000
                   052716
                             000240
                                                           BIS.
                                                                     #Q$MRP2,(SP)
                                                                                                  :SELECT MRP
     107
         000200
                                                           CALL
                                                                     CSR4
     108
     109
         000204
                   012746
                             140000
                                                           MOV.
                                                                                                  ;CLEAR·MRP NO+CLOCK·BITS·
;SET·MRP·CLOCK·
                                                                     #0$MNC,-(SP)
     110 000210
111 000214
                   012746
                             101000
                                                           MOV.
                                                                     #<Q$MSP+Q$LBD>,-(SP)
                                                           CALL
                                                                     CSR i
     113
                                                           DE-SELECTION
     114
     115 000220
                   012746
                             001001
                                                           MOM
                                                                     #<Q$LBD+Q$LBP>,-(SP)
                                                                                                  ;CLEAR DRIVE AND PULSE
     116 000224
117 000230
                    052716
                             000360
                                                                     #<Q$CSEL>,(SP)
#<Q$NCLK>,-(SP)
                                                           BIS-
                                                                                                  CLR SELECTION BITS
         000230
                   012746
                             176000
                                                           MOV.
     118
         000234
     120 000240
                   011666
                             000002
                                                                     (SP),2(SP)
                                                           MOV.
                                                                                                  :MOVE RETURN ADDRESS DOWN STACK
     121 000244
122 000246
                    005726
                                                           TST.
                                                                     (SP) +
                                                                                                  :POINT TO RETURN ADDRESS
                                                           RETURN.
```

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MRPSUB- MACRO-M. 10 27-MAR-80 15:12 PAGE-8
                                           Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
                                                              DATA-TRANSFER-LOD-BUS-REGISTER-TO-A-DESTINATION-ON-THE-MRP-BUS-SINGLE-CLOCK SEQUENCER ONLY-
     126
127
     128
                                                              INPUT:
     129
                                                                        DATA FOR PRE-SELECTED MRP DESTINATION
     139
                                                              2(SP)
     131
          000250
                                                    LBMSC::
                                                                         2(SP).QR$LBR
     133
          000250
                     016667
                               999992
                                         176424
                                                              MOSS.
                                                                                                        ;MOVE · DATA TO · LOD · BUS · REG · .
                                                                        2(SP), URBLER:
#(Q$LBD+Q$LBP), -(SP)
#(Q$CSEL), (SP)
#(Q$NCLK), -(SP)
#Q$MRP2, (SP)
          000256
                                                              MOV.
                    012746
052716
     134
                               001001
                                                                                                        CLR.DRIVE AND PULSE CLR.SELECTION BITS
     135
          000262
                               000360
                                                              BIS
                                                                                                        ;SET NO-CLOCKS
;SELECT MRP
                    012746
052716
     136
          000266
                               176000
                                                              MOV-
          000272
                                                              BIS
     137
                               000240
     138
          000276
                                                              CALL
     139
                                                              MOV.
                                                                         #Q$MNC,-(SP)
#<Q$MSC+Q$LBD>,-(SP)
     149
          000302 ·
000306
                    012746
                               140000
                                                                                                        :CLEAR MRP NO+CLOCK BITS
                     012746
                                                              MOV.
     141
                               041000
                                                                                                        ;SET-MRP-CLOCK-
          000312
                                                                        CSR1
                                                              CALL -
     143
     144
145
                                                              DE-SELECTION
     146
          000316
                     012746
                               001001
                                                              MOV
                                                                         #<Q$LBD+Q$LBP>.-(SP)
                                                                                                        :CLR DRIVE AND PULSE
     147
          000322
                     052716
                                                                         #<Q$CSEL>,(SP)
                                                                                                        CLR SELECTION BITS
                               000360
                                                              віз.
     148
          000326
                     012746
                                                              MOV.
                                                                         #<Q$NCLK>,-(SP)
                                                                                                        :SET-NO-CLOCKS
     149
          000332
                                                              CALL
                                                                         CSR1
     150
                                                                                                        :MOVE RETURN-ADDRESS DÓWN STACK
:POINT TO RETURN ADDRESS
     151 000336
                                                              MOV.
                                                                         (SP),2(SP)
                    011666
                               000002
     152 000342
153 000344
                                                                         (SP)+
                     005726
                                                               TST.
                                                              RETURN.
```

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O M1110 27-MAR-80 15:12 PAGE 9
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MRPSUB-
     155
    156
157
158
159
                                                                  DATA · TRANSFER · TO · LOD · BUS · REG · FROM · MRP
                                                                  OUTPUT:
                                                                             DATA FROM.PRE-SELECTED.MRP.SOURCE.
     160
     161
          000346
                                                       MRPLB::
     162 000346
163 000352
                     012746
                                001001
                                                                             #<Q$LBD+Q$LBP>,-(SP)
#<Q$CSEL>,(SP)
#<Q$NCLK>,-(SP)
                                                                  MOV
                                                                                                             CLR-DRIVE AND-PULSE
CLR-SELECTION-BITS-
SET-NO-CLOCKS-
SOURCE-IS MRP-
                     052716
012746
                                000360
                                                                 BIS
MOV
     164 000356
                                176000
    165 000362
166 000366
167
                     052716
                                000240
                                                                             #0$MRP2,(SP)
                                                                  BIS.
                                                                  CALL
     168 000372
                     011646
                                                                 MOV.
                                                                             (SP),-(SP)
                                                                                                             :MOVE-RETURN-ADDR-UP STACK-
:MOVE-DATA ONTO STACK-
    169 000374
170
                     016766
                                176424
                                           000002.
                                                                 MOV-
                                                                             QR$LBR,2(SP)
    171 000402
172 000406
173 000410
                     012746
                                000240
                                                                 MOV.
                                                                             #Q$MRP2,-(SP)
                                                                                                              :CLEAR MRP SELECT:
:SET NOTHING
                     005046
                                                                 CLR.
                                                                             -(SP)
                                                                            CSR1
    174 000414
                                                                 RETURN.
```

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MRPSUB- MACRO-M1110 27-MAR-80 15:12 PAGE-10
                                        Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
     176
177
     178
179
                                                           MRP - CONTROL - REGISTER - LOADING -
     180
                                                           INPUT:
     181
                                                           2(SP)
                                                                     BIT-SETTING-FOR-MRP-CONTROL-REGISTER
     182
     183 000416
                                                 MRPCR::
         000416
                    052766
                              100000
                                       000002
                                                           BIS
                                                                     #MNOBREG,2(SP)
                                                                                                   ; INHIBIT BRANCH REGISTER SELECT
     185
         000424
     186
         000424
                   016667
012746
052716
                             000002
                                       176424
                                                           MOV-
                                                                     2(SP),QR$LBR
                                                                                                  #CONTROL BITS DESTINED FOR MRP #CLEAR DRIVE AND PULSE #CLR SELECTION BITS
     187
         000432
                             001001
                                                           MOV
                                                                     #<Q$LBD+Q$LBP>,-(SP)
         000436
                             000360
                                                           BIS
                                                                     #<Q$CSEL>,(SP)
     189
         000442
                   012746
                             000640
                                                           MOV.
                                                                     #Q$MRP,-(SP)
                                                                                                   :SELECT:MRP
     190 000446
191
                                                           CALL
                                                                     CSR1
     192 - 000452 -
                   005046
                                                           CLR
                                                                     -(SP)
                                                                                                   ;CLEAR · NOTHING 
;SET · PULSE
     193
          000454
                    012746
                             000001
                                                           MOV.
                                                                     #Q$LBP,-(SP)
     194
         000460
                                                           CALL
                                                                     CSR4
     195
     196
         000464
                   012746
                                                                                                                          AND PULSE
                             000041
                                                                                                  :CLEAR·CR·SELECTION
:SET·NOTHING
                                                           MOV.
                                                                     #<Q$MRP+Q$LBP>,-(SP)
          000470
                    005046
                                                           CLR.
CALL
                                                                     -(SP)
     198 000472
                                                                     CSR 1
     199
     200
         000476
                   011666
                             0000021
                                                                                                   :MOVE-RETURN-ADDRESS DOWN-STACK-
:POINT-TO-RETURN-ADDRESS
                                                           May.
                                                                     (SP),2(SP)
     201
         000502
                    005726
                                                           TST.
RETURN
                                                                     (SP) +
     202 · 000504
203
     204
                    000001
                                                           .END
```

·婚院:

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O M1110 27-MAR-80 15:12 PAGE 10-1
Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
MRPSUB M
SYMBOL TA
ALUCKE = . 040006
                             BYTE42= 000052
                                                          BYTE94= 000136
                                                                                       PLR.EN= 000200
                                                                                                                    Q$RNC - = - 006000
ALUOE - - 004000
A01 = 010000
                             BYTE43= 000053
                                                          BYTE95=-000137
                                                                                       QR$CR1= 176420
QP$CR2= 176422
                                                                                                                    Q$RSC -- 004000
                             BYTE44= 000054
                                                          BYTE96= 000140
                                                                                                                    Q$RSET= 000010
BITVAL = . 000000
                             BYTE45= 000055
                                                          BYTE97 = . 000141
                                                                                       QR$LBR= · 176424
                                                                                                                    Q$SM = 100000
Q$SP = 000120
BIT0 = 000001
BIT1 = 000002
                                                          BYTE98= 000142
                             BYTE46= 0000056
                                                                                       Q$ATTN=.000100
                             BYTE47= 000057
                                                          BYTE99= 000143
                                                                                       Q$BCL - - 000001
Q$CCCP - 000040
                                                                                                                    Q$SP2 - - 000340
BIT10 = 002000
                             BYTE48= 000060
                                                          BYTVAL = . 000144
                                                                                                                    RGQ.EN= 000200
BIT11 = 004000
                             BYTE49=:000061
                                                          CBKALL= 001000
                                                                                       Q$CHB - = - 000400
                                                                                                                    RGQ.VA= .020000
SEQMM ...000000RG
                                                          CBKCLK= 000400
BIT12 -- 010000
                             BYTE5 = 000005
                                                                                       Q$CHRL=.000200
                                                                                                                                            002
BIT13 = 020000
                             BYTE50=-000062
                                                          CHOBRE = 100000
                                                                                       Q$CLR - = - 000040
                                                                                                                    SEQ.CI = .000010
BIT14 = 040000
                             BYTE51=-000063
BYTE52=-000064
                                                          CPCCEN= · 010000
                                                                                       Q$CNC - 0300040
                                                                                                                    S$CLR = 000000
BIT15 = 100000
                                                          CPREAD = . 040000
                                                                                             = 000060
                                                                                       OSCP.
                                                                                                                    S$1 A
                                                                                                                             000001
       = 0000004
                             BYTE53= 000065
                                                          CPWRTE = - 020000
                                                                                       Q$CPCC= 0000010
                                                                                                                    S$08
                                                                                                                             9999995
BIT3
       = 0000010
                             BYTE54= 000066
                                                          CSADRD = 000004
                                                                                      Q$CP2---000260
Q$CSC---010000
                                                                                                                    S$QR
                                                                                                                             000006
       = · 000020
RIT4
                             BYTE55= 0000067
                                                          CSEQCI = 100000
                                                                                                                           ₹ · 000004
                                                                                                                    S$QX
       = 000040
BIT5
                             BYTE56=-000070
BYTE57=-000071
                                                          CSOE - - 000040
                                                                                       0:$CSFL = - 000360
                                                                                                                    S$SR
                                                                                                                             000007
       = 000100
                                                          CSRI
                                                                                       Q$CSET= 0000002
                                                                                                                    9.891
                                                                                                                             000010
BIT7
       = 000200
                             BYTE58= 000072
                                                          CSWRTE = 000100
DBR:RD = 000001
                                                                                       Q$CSP - - 020000
                                                                                                                    S$S2
                                                                                                                             000014
BIT8
       ≈·000400
                             BYTE59 - 000073
                                                                                       Q$DMA - = - 000001
                                                                                                                    TD$CTR=-176370
       = .001000
BIT9
                             BYTES = 000006
                                                          DB$CPP= 001457
                                                                                       Q$ENBK= 040000
                                                                                                                    TD$CTW= 176360
BYTE0 = 000000
BYTE1 = 000001
                             BYTE60= 000074
                                                          DB$SPT= 000026
DB$TPC= 000023
                                                                                       Q$ENOP=.020000
                                                                                                                    TD$INL= 004000
                             BYTE61= 000075
                                                                                       Q$FAL - 004000
                                                                                                                    TD$MEM= 000270
BYTE10= 000012
                             BYTE62= .000076
                                                          DISPGS= 100000
                                                                                       Q$FC: = 000045
                                                                                                                    TD$OAR= 176344
BYTE11= 000013
                             BYTE63= 000077
                                                          DMAAUR = . 000005
                                                                                       Q$F0 - 000044
                                                                                                                    TD$OTR= 176346
BYTE12= 000014
                             BYTE64= . 000 100
                                                          DMARRD = . 000003
                                                                                              = 000046
                                                                                       Q$FP
                                                                                                                    TD$QRD=:000274
BYTE13=-000015
                             BYTE65= 000101
                                                                                                                    TD$SW = 176376
TD$TAR= 176372
                                                          DMARWR= 000004
                                                                                       Q$HBF - - 000002
BYTE14= 000016
                             BYTE66=-000102
BYTE67=-000103
                                                          ENBR -
                                                                 = 010000
                                                                                       Q$ICP -- 000006
BYTE15=-000017
                                                          LBMRP.
                                                                   000152RG
                                                                                  002 · Q$IHB · = · 000003
                                                                                                                    TD$TAU=
                                                                                                                             .176362
BYTE16=-000020
                             BYTE68= 000104
                                                          LBMSC-
                                                                   000250RG
                                                                                       Q$IHRL=.000002
                                                                                                                    FD$TDR#€ 176374
BYTE17= 000021
                                                          LOC.EN= 000100
LOC.WA= 040000
                             BYTE69= 000105
                                                                                       Q$IMRP=.000007
                                                                                                                    TD$TDW=
T$AD =
BYTE18= 0000022
                             BYTE7 = 000007
                                                                                       Q$LBD - = -001000
                                                                                                                             000020
BYTE19= 000023
                             BYTE70= 000106
                                                          LOC:WB= 100000
                                                                                       Q$LBDP= 001001
                                                                                                                    T$RA
                                                                                                                             0000002
BYTE2 - = - 000002
                             BYTE71= 000107
                                                          MAREH1 = . 000001
                                                                                       Q$LBP - 000001
                                                                                                                    T≴RD
                                                                                                                             000010
BYTE20= 0000024
                             BYTE72= 000110
                                                          MAREN2 = . 004000
                                                                                       Q$LDCD= 000003
Q$LDMD= 000004
                                                                                                                    T$BS0 · = ·
BYTE21 = 000025
                             BYTE73= 000111
                                                          MARLOD= 010000
                                                                                                                    T⊄RT
                                                                                                                          = .000020
BYTE22= 0000026
                             BYTE74= 000112
                                                          MAROUT = . 000002
                                                                                       Q$LDPP= 002000
                                                                                                                    T$BTAR= 000030
BYTE23= 0000027
                             BYTE75= 000113
                                                          MAR.LO= 002000
MAR.OU= 000040
                                                                                       Q$LHP -- 010000
Q$MNC -- 140000
                                                                                                                    T$BTD = 002000
T$CD = 000100
BYTE24=: плилал
                             BYTE76= 000114
BYTE25= 000031
                             BYTE77=-000115
                                                          MBKALL= 001000
                                                                                       Q$MR - - 000052
                                                                                                                    J$CLK = 002000
BYTE26= 000032
                             BYTE78= 000116
                                                          MBKCLK= 000400
                                                                                       Q$MRP - - 000040
                                                                                                                    T$DISK= 000200
T$DRD = 000004
BYTE27=:000033
                             BYTE79= 000117
                                                          MMADRD=-000100
                                                                                       Q$MRP2= 000240
BYTE28= 000034
                             BYTE8 = 000010
                                                          MMLEET=: 000002
                                                                                       Q$MSC - - 040000
                                                                                                                    T$EMEM=∙010000
BYTE29= 000035
                             BYTE80= 000120
                                                                 = 000004
                                                          MMOE -
                                                                                      Q$MSET= 000004
Q$MSP : 100000
O$NCLK 1776000
                                                                                                                    T$FSAA≓ 000000
BYTE3 = 000003
                             BYTE81= 000121
                                                          MMURTE = 000010
                                                                                                                    T$FSA8 = - 000004
BYTE30 - 000036
                             BYTE82= 000122
                                                          MNOBRE = 100000
                                                                                                                    T$FSAC≈ 000014
BYTE31 = . 000037
                             BYTE83=-000123
                                                          MREN1 = 000001
                                                                                       Q$PP
                                                                                              = 000100
                                                                                                                    T$FSB2= 000010
BYTE32= 000040
                             BYTE84= 000124
                                                          MREN2 -=
                                                                                      Q$PPSW= 000320
0$PP2 = 000300
                                                                   020000
                                                                                                                             000026
BYTE33= 000041
                             BYTER5 = . 000125
                                                          MRPCR
                                                                   000416RG
                                                                                                                    T$IBAR≈ 000024
                                                                                  002
BYTE34= 0000042
                             BYTE86= 999126
                                                          MRPCRA
                                                                   000424RG
                                                                                  002.Q$QHLT=.000013
                                                                                                                    T$18F ---
                                                                                                                             020000
BYTE35=-000043
                             BYTE87= 000127
                                                          MRPLB
                                                                                              = 000043
                                                                   000346RG
                                                                                  002:0$QL:
                                                                                                                    T$IBF
                                                                                                                             040000
BYTE36 = · 000044
                             BYTE88= 000130
                                                                                  002 · Q$OLA · = · 000043
                                                          MRPSUB
                                                                   000000R
                                                                                                                    T$ICD -=
                                                                                                                              000040
BYTE37= 000045
                             BYTE89= 900131
                                                                   000040
                                                          MSYN.
                                                                                       Q$QLB∙
                                                                                              · = · 000054
                                                                                                                    T$MODE= 004000
BYTE38= 000046
                             BYTE9 = 000011
                                                          Ν.
                                                                   000144
                                                                                       Q$QLR - = - 000001;
                                                                                                                    T$0B
                                                                                                                             000036
BYTE39= 000047
                             BYTE90=-000132
                                                                   000010
                                                                                                                    T$08E - = -
                                                          PLB
                                                                                             = 000042
                                                                                       Q#QW-
                                                                                                                             004000
BYTE4 = 000004
                             BYTE91=-000133
                                                          PLC
                                                                 = 000020
                                                                                       Q$RDCD= 000005
                                                                                                                    T$OBE
                                                                                                                          · = · 010000
BYTE40= 000050
                             BYTE92= 000134
                                                          PLD
                                                                 = .000030
                                                                                       Q$RDMD = . 000006
                                                                                                                    T$0BRA= : 000034
BYTE41 = . 000051
                             BYTE93=
                                      000135
                                       00135 PLRUR = 000200
Approved For Release 2005/07/12 : CIA-RDP85_00514R000200020001_3
                                                                                                                    Т$0ВЩА= 000032
```

```
MRPSUB MACRO mili0 27-MAR-80 15:12 PAGE 10-2
SYMBOL TABLE Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
T$0UTA=-100000
                                    WORD18= 000044
                                                                       WORD4 = 000010
                                                                                                           WORD61=-000172
T$RBD0= 000200
                                                                                                                                              WORD82=-000244
                                   WORD19= 0000046
                                                                       WORD40= 000120
                                                                                                           WORD62=.000174
                                                                                                                                              WORD83= 000246
WORD84≒ 000250™
WORD85= 000252
T$RNB - = - 000040
                                   WORD2 - 000004
WORD20 - 000050
                                                                       WORD41 = 000122
                                                                                                           WORD63= 000176.
T$RSET= 040000
                                                                       WORD42= 000124
                                                                                                           WORD64= 000200 ...
WORD65= 000202
T$SC· = 0000022
T$SCLK = 020000
T$SEG1 = 000000
                                   WORD21= 000052
                                                                       WORD43=-000126
                                                                                                                                             :WORD86=:000254
WORD87=:000256
                                                                       WORD43= 000126
WORD44= 000130
WORD45= 000132
WORD46= 000134
WORD47= 000136
WORD48= 000140
                                    WORD22= 000054
                                                                                                           WORD66= 000204;
                                   WORD23= 0000056
                                                                                                           WORD67= 000206
                                                                                                                                              WORD88= 000260
T$SEG2= 0000001
                                   WORD24= 000060
WORD25= 000062
                                                                                                          WORD68=-000210
WORD69=-000212
WORD7 =-000016
                                                                                                                                              WORDOS- 000262

WORDOS - 000262

WORDOS - 000264

WORDOS - 000266

WORDOS - 000270

WORDOS - 000270
T$SEG3=-000002
T$SO---000001
                                    WORD26≃ 000064
T$UBUS= 100000
                                   WORD27= 000066
WORD28= 000070
                                                                       WORD49= 000142
WORD5 = 000012
WORD50= 000144
                                                                                                          WORD70= 000214
WORD71= 000216
T$1CLK=-000400
T$8BEN=-000020
                                   WORD29- 000072
                                                                                                           WORD72= 000220
                                                                                                                                              WORD93= 000272
UBD. IN= 000020
                                   WORD3 = 000006
WORD30 = 000074
                                                                       WORD51 = 000146
                                                                                                          WORD73=-000222
WORD74=-000224
                                                                                                                                              WORD94= 000274
WORD0 = 000000
WORD1 = 000002
WORD10= 000024
                                                                       WORD52= 000150
                                                                                                                                              WORD95= 000276
                                    WORD31= 000076
                                                                       WORD53 = 000152
WORD54 = 000154
                                                                                                           WORD75 - 000226
                                                                                                                                              WORD96= 000300
WORD97= 000302
                                   WORD32= 000100
WORD33= 000102
                                                                                                           WORD76= 000230
WORD11=-000026
WORD12=-000030
WORD13=-000032
                                                                       WORD55= 000156
                                                                                                          WORD77=-000232
                                                                                                                                              WORD98 = 000304
                                    WORD34= 000104
                                                                       WORD56=-000160
WORD57=-000162-
                                                                                                          WORD78= 000234
                                                                                                                                              WORD99= 000306
WRDVAL= 000310
                                   WORD35=-000106
                                                                                                          WORD79= 000236
WORD14= 000034
                                   WORD36=-000110
                                                                       WORD58= 000164
                                                                                                          WORD8 = 000020
                                                                                                                                                          000066RG
WORD15= 000036
                                                                                                                                                                            002
                                    WORD37= 000112
                                                                       WORD59= 000166
WORD6 = 000014
                                                                                                          WORD80= 000240
WORD16= 000040
                                                                                                                                              XTREAD = . 001000
                                   WORD38= 000114
                                                                                                          WORD81 = . 000242
WORD17= 000042
                                                                                                                                              XTWRTE = 000400
                                   WORD39=-000116
                                                                       WORD60 = . 000170
. ABS.
           аааааа
                            000
            000000
                            001
MRPSUB -
           000506
                            002
ERRORS DETECTED:
                          0
VIRTUAL-MEMORY-USED: 3021 WORDS- (-12-PAGES)
DYNAMIC MEMORY: 3860 WORDS ( 14 PAGES)
ELAPSED TIME: 00:00:43
MRPSUB, MRPSUB/-SP=[20,1]IM,[20,1]MRPSUB
```

```
PPSUB- MACRO milio 27-MAR-80 15:26 PAGE_5
                                          Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
                                                              .FITLE. PRSUB...
       2.000000
3
                                                              .PSECT: PPSUB:
       4567
                                                              .MCALL WTSE$S.CLEF$S
                    000003
                                                   EFN:3
                                                                        3
       8
                                                             HARDWARE · QUERY · RESOLVER · 1MANUAL 1
PIPELINE · PROCESSORS · SUBROUTINES ***
                                                                                                       DEBUGGING # IDS 7
      10
      13
                                                             DATA · TRANSFER ·
                                                             LOD-BUS-REGISTER-TO-A-DESTINATION-ON-THE-PPS-BUS
      15
      16
17
                                                             INPUT:
                                                             2(SP)
                                                                       DATA FOR PRE-SELECTED PPS DESTINATION
      18
      19
      20
         ававая
                                                   LBPP::
      21
         000000
                    016667
                                                                       2(SP),QR$LBR.
#<Q$LBD+Q$LBP>,-(SP)
                              000002
                                        176424
                                                             MOV
                                                                                                      :MOVE DATA TO LOD BUS REG
          000006
                    012746
                              001001
                                                             MOV
          000012
                    052716
                              000360
                                                                       #<Q$CSEL>,(SP)
#<Q$NCLK>,-(SP)
                                                             BIS.
                                                                                                      CLR SELECTION BITS
SET NO-CLOCKS
SELECT PP
      24
         000016
                    012746
                              176000
                                                             MOV.
      25
         000022
                    052716
                              000300
                                                             BIS:
                                                                        #Q$PP2,(SP)
          000026
                                                             CALL
                                                                       CSR4
      28.000032
                    012746
                              006000
                                                             MOV.
                                                                       #Q$RNC,-(SP)
#Q$LBD,-(SP)
                                                                                                      :CLEAR·CP·NO-CLOCK·BITS
:SET·LOD·BUS·DRIVE·
         000032
                    012746
                              001000
                                                             MOV.
         000042
                                                             CALL
                                                                       CSR1
      31
      32
33
                                                             DE-SELECTION
                                                                                                      CLEAR DRIVE AND PULSE
CLR SELECTION BITS
SET NO-CLOCKS
         000046
                    012746
                              001001
                                                             MOV.
                                                                        #<Q$LBD+Q$LBP>,-(SP)
      35
         000052
                    052716
                              000360
                                                             BIS.
MOV.
                                                                       #<Q$CSEL>,(SP)
      36
         000056
000062
                    012746
                               176000
                                                                       #<Q$NCLK>,-(SP)
                                                                       CSR1
      38
         000066
000072
      39
                    011666
                              000002
                                                             MOV.
                                                                        (SP),2(SP)
                                                                                                      :MOVE-RETURN-ADDRESS DOWN-STACK-
:POINT-TO-RETURN-ADDRESS-
      40
                    005726
                                                                        (SP)+
      41 000074
                                                             RETURN
```

ALL THE

```
PPSUB-
                0-M1110 27-MAR-80 15:26 PAGE-6
                                             Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
      43
44
      45
                                                                  DATA TRANSFER
      46
47
48
                                                                  LOD BUS REGISTER TO A DESTINATION ON THE PPS BUS
                                                                  SINGLE CLOCK SEQUENCER ONLY
      49
50
51
52
53
                                                                  INPUT:
                                                                  2(SP)
                                                                            DATA FOR PRE-SELECTED PPS DESTINATION
          000076
                                                       ĹBPSC::
      54
55
          000076
000104
                     016667
012746
                                                                                                             :MOVE DATA TO LOD BUS REG:

:CLEAR DRIVE AND PULSE:

:CLEAR SELECTION BITS:

:SET NO CLOCKS:

:SELECT PP

:WRITE CONTROL REGISTER:
                                 000002
                                                                  MOV
                                                                             2(SP),QR$LBR
                                 001001
                                                                  MOV-
                                                                             #<Q$LBD+Q$LBP>,-(SP)
           000110
                      052716
                                 000360
                                                                             #Q$CSEL,(SP)
#<Q$NCLK>,-(SP)
                                                                  BIS
      57
58
          000114
                      012746
                                                                  MOV.
          000120
                      052716
                                 000300
                                                                  BIS
                                                                             #Q$PP2,(SP)
      59
          000124
                                                                  CALL
                                                                             CSR1
      60
      61
          000130
                      012746
                                 006000
                                                                             #Q$RNC,-(SP)
                                                                  MOV.
                                                                                                             :CLEAR·PP·NO+CLOCK·BITS
:SET·PP·CLOCK·
      62
63
          000134
                     012746
                                005000
                                                                  MOV.
                                                                             #<Q$RSC+Q$LBD>.-(SP)
          000140
                                                                  CALL
                                                                             CSR1
      65
                                                                  DE-SELECTION
      66
      67
           000144
                      012746
                                 001001
                                                                                                             :CLEAR DRIVE AND PULSE
:CLR SELECTION BITS
:SET NO CLOCKS
                                                                  MOV-
                                                                             #<Q$LBD+Q$LBP>,-(SP)
       68
          000150
                      052716
                                 000360
                                                                  BIS.
                                                                             #Q$CSEL,(SP)
#<Q$NCLK>,-(SP)
      69
70
           000154
                      012746
                                 176000
                                                                  MOV.
           000160
          000164
000170
000172
                                                                                                              :MOVE RETURN ADDRESS DOWN:STACK
:POINT TO RETURN ADDRESS
      72
73
                      011666
                                000002
                                                                  MOV.
                                                                             (SP),2(SP)
                      005726
                                                                             (SP)+
                                                                  RETURN.
```

```
PPSUB- MACRO /11110 27-MAR-80 15:26 PAGE 7
                                               Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
       76
77
78
79
                                                                      DATA TRANSFER TO LOD BUS REG FROM PPS
       80
                                                                      OUTPUT:
      81
82
                                                                                 DATA FROM PRE-SELECTED PPS SOURCE
                                                                      (SP)
      83
84 000174
85 000174
86 000200
                                                          PPLB::
           000174
000200
                       012746
052716
012746
                                                                     MOV-
                                                                                 #<Q$LBD+Q$LBP>,-(SP)
#Q$CSEL,(SP)
#<Q$NCLK>,-(SP)
                                                                                                                    :CLEAR DRIVE AND PULSE
:CLR SELECTION BITS
:SET NO-CLOCKS
                                  000360
176000
                                                                     BIS.
       87
           000204
                                                                     MOV
           000210
000214
000220
       88
                       052716
                                  000300
                                                                      BIS
                                                                                 #Q$PP2,(SP)
       89
90
                                                                                 CSR1
(SP),-(SP)
QR$LBR,2(SP)
                                                                     CALL
                       011646
                                                                                                                    MOVE RETURN ADDR UP STACK
MOVE DATA ONTO STACK
                                                                     MOV-
           000222
                       016766
                                   176424
                                              000002-
                                                                     MOV
       92
           000230
000234
000236
       93
94
                       012746
005046
                                  000300
                                                                     MOV.
CLR.
                                                                                                                    :CLEAR PP SELECT
                                                                                 #Q$PP2,-(SP)
                                                                                 -(SP)
CSR1
       95
96
                                                                     CALL
           000242
                                                                     RETURN.
```

122.如当城市 作美宗教,进入自己

```
PPSUB- . . M
               0.M1110 27-MAR-80 15:26 PAGE-8
                                           Approved For Release 2005/07/12—CIA-RDP85-00514R000200020001-3
      98
     99
100
                                                               PPS · CONTROL · REGISTER · LOADING
     101
     102
     103
104
                                                                          BIT-SETTING FOR PPS-CONTROL REGISTER
                                                                2(SP)
     105
     106
          000244
                                                     PPCR::
     107
          000244
                     016667
                               000002
                                                                          2(SP).QR$LBR
#<Q$LBD+Q$LBP>.-(SP)
                                                                                                         #CONTROL BITS DESTINED FOR PPS
#CLEAR DRIVE AND PULSE
#CLR SELECTION BITS
#SELECT PP
                                                               MOV
     108
          000252
000256
                     012746
052716
                               001001
                                                                MOV.
     109
                                                               BIS.
                                                                          #Q$PP,-(SP)
                               000360
     110
111
          000262
                     012746
          000266
                                                                CALL
                                                                          CSR1
     113 000272
                     005046
                                                                CLR -
                                                                          -(SP)
                                                                                                          : CLEAR - NOTHING -
     114 000274
115 000300
                     012746
                               000001
                                                               MOV-
                                                                          #Q$LBP,-(SP)
                                                                                                          ;SET-PULSE
     116
     117 000304
118 000310
119 000312
                     012746
                               000101
                                                                                                          CLEAR CR SELECTION AND PULSE
                                                               MOV-
                                                                          #<0$PP+Q$LBP>,-(SP)
                     005046
                                                                CLR
                                                                          -(SP)
                                                                                                          :SET-NOTHING . . .
                                                                CALL
                                                                          CSR1
     120
121
122
          000316
000322
                                                                          (SP),2(SP)
                     011666
                               000002
                                                               MOV.
                                                                                                          :MOVE-RETURN-ADDRESS DOWN-STACK-
:POINT TO RETURN-ADDRESS-
                     005726
                                                               TST.
RETURN.
                                                                          (SP) +
     123 000324
```

```
PPSUB- - MACRO - M1110 27-MAR-80 15:26 PAGE - 9
                                          Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
     125
     126
                                                             SELECT-A-QLB PAGE-
     128
     129
                                                             UPON ENTRY:
     130
                                                             2(SP) = PAGE NUMBER UPON EXIT:
     131
      i32
                                                              STACK · RESTORED ·
     133
134
                                                              R1. R2 DESTROYED
      135
     136
137
          000326
000326
                    005046
                                                             CLR.
                                                                        -(SP)
                                                                                                      :START-MICROCODE: AT 0
          000330
                                                                        SEGOS
                                                             CALL
     139
          000334
                                                              CLR
                                                                        -(SP)
                                                                                                      : RESET BR INHIBIT
     140
          000336
000342
                                                                        CPCR
     141
                    R12746
                              000377
                                                             MOV.
                                                                        #377,-(SP)
                                                                                                      :SET-MRP-MICRO-ADDRESS-=-X*FF* (JUMP-SELF)
      142
          000346
                                                              CALL
                                                                        SEQMM-
-(SP)
      143
          000352
                     005046
                                                              CLR
                                                                                                      ; RESET BR - INHIBIT
      144
          000354
                                                              CALL
                                                                        MRECR
      145
          000360
                     012767
                               001000
                                         176422
                                                                        #Q$REBK,QR$CR2
#<Q$SM+Q$ENOP>,QR$CR2
                                                             MOV
                                                                                                       :RE-ARM INTERRUPTS
                    012767
012746
      146
          000366
                               120000
                                         176422
                                                              MOV
                                                                                                      :SET-SEARCH-MODE-+ ENABLE-INTERRUPTS-
:CLEAR-ALL SELECTIONS-
      147
          000374
                               000360
                                                              MOY-
                                                                        #Q$CSEL,-(SP)
      148
          000400
                    052716
                               001001
                                                                                                      CLEAR DRIVE AND PULSE.
                                                              BIS
                                                                        #<Q$LBD+Q$LBP>,(SP)
     149
          000404
                    052716
                               030000
                                                             BIS
                                                                        #Q$CNC,(SP)
      150
          000410
                    005046
                                                                         -(SP)
                                                                                                      :SET-NOTHING
      151
          000412
                                                             CALL
      152
          999416
                    012767
012767
     153
                               000003
                                         176424
                                                              MOV
                                                                        #Q$LDCD.QR$LBR ;MOVE.ATTN CODE.TO.LOD.BUS.REG
#<Q$ATTN+Q$SM+Q$ENOP>,QR$CR2.:SET.ATTN.CODE.READY
QR$CR2.R1 ;READ CSR2
      154
          000424
                               120100
                                         176422
                                                             MOV
      155
          000432
                     016701
                               176422
                                                             MOV.
                                                   1$:
     156
157
          000436
                     032701
                               000100
                                                              BIT
                                                                        #Q$ATTN,R1
                                                                                                      :ATTN:CLEAR
          000442
                    001373
                                                             BHE
                                                                                                      :NO. READ AGAIN
      158
          000444
      159
                     012767
                               000041
                                         176424
                                                                        #041.QR$LBR: ;CD:MEMORY START:ADDRESS: =X*21*
#<Q$CCCP+Q$SM+Q$ENOP>,QR$CR2:;SET:CC:TO:CP:
QR$CR2.R1 ;READ CSR2
                                                             MOV
      160
          000452
                    012767
                               120040
                                         176422
                                                             MOV.
      161
          000460
                    016701
032701
                               176422
                                                   2$:
                                                             MOV-
      162
          000464
                                                             BIT
                               000040
                                                                        #Q$CCCP,R1
                                                                                                       : IS . CC . TO . CP . CLEAR .
          000470
                     001373
                                                                                                       :NO. READ AGAIN
                                                             BNE
                                                                        2$
     164
          999472
                    012767
     165
                               000001
                                         176424
                                                              MOV
                                                                        #1.QR$LBR: :TRANSFER:COUNT:=:1 WORD:
#4Q$CCCP+Q$SM+Q$ENOP>.QR$CR2::SET:CC:TO:CP
                                                                        #1.QR$LBR
          000500.
                    012767
      166
                               120040
                                         176422 -
                                                             MOV.
          000506
                    016701
      167
                               176422
                                                   3$:
                                                             MOV
                                                                        QR$CR2,R1
                                                                                                      :READ CSR2
      168
          000512
                    032701
                               000040
                                                             BIT
                                                                        #Q$CCCP,R1
                                                                                                       : IS . CC . TO . CP . CLEAR
      169
          000516
                    001373
                                                                                                       ;NO, READ-AGAIN- _
     170
                                                                                                                                           7.7
                                                                        2(SP), DATA1 ; PUT PAGE VALUE INTO BUFFER DATA1 ; MICROCODE REINCREMENTS #DATA1, QR$LBR ; ; CC MEMORY DATA BUFFER #KQ$CCCP+Q$SM+Q$ENOP>, QR$CP2 ; SET · CC · TO · CP
          000526
                     016667
                               000002
                                        000000G.
                                                             MOV:
     172-000526
                    005367
                               000000G
                                                             DEC
     173 000532
                    012767
                               000000G-176424
                                                             MOV
     174 000540
                    012767
                               120040
                                         176422
     176
177
                                                             WAIT-FOR-INTERRUPT-FROM-CP-
     178 000546
                                                             WTSE$S - #EFN.3
                                                                                                                               DEMAND THE POTT
                                                                                                                                                               1
     179
                                                                                                                                                         180
          000560
                                                             CLEF$S: #EFN.3
```

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0-M1110 27-MAR-80 15:26 PAGE 9-1 Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3 182 RE-ARM. INTERRUPTS. 183 184 000572 012767 100400 176422 #<Q\$\$M+Q\$CHB>,QR\$CR2 ;CLEAR·INTERF #<Q\$\$M+Q\$REBK>,QR\$CR2·;RE-ARM· #<Q\$\$M+Q\$ENBK+Q\$ENOP>,QR\$CR2·;ENABLE· MOV :CLEAR · INTERRUPT · (USE · HIT · BUFFER · INT) 185 000600 012767 101000 176422 MOV 186 00060E 012767 160000 176422 MOV 187 000614 005046 OL R - (SP) :CLEAR · NOTHING · IN · CSR1 189 000616 012746 176000 MOV #Q\$NCLK,-(SP) :SET-NO-CLOCKS 190 000622 CALL CSR1 191 000626 005067 176422 CLR: QR\$CR2 :SET LOAD MODE 192 000632 193 012746 MOV: #1761,-(SP) #START-CP-AT-X-13F11 000636 CALL SEQUS 195 000642 005046 -(SP) CLR :RESET.BR.INHIBIT 196 000644 CALL CPCR 197 000650 012746 000377 MOV #377, ;SET-MRP-MICRO-ADDRESS-=-X1FF1 (JUMP-SELF) -(SP)000654 CALL SEQMM. 199 000660 CLR -(SP); RESET.BR. INHIBIT. 266 000662 CALL MRPCR 201 000666 012767 001000 176422 MOV #Q\$REBK,QR\$CR2 :RE-ARM-INTERRUPTS SET SEARCH MODE + ENABLE INTERRUPTS SCLEAR ALL SELECTIONS CLEAR DRIVE AND PULSE CLEAR CP AND PPS NO-CLOCKS 202 000674 012767 120000 176422 #<Q\$SM+Q\$ENOP>,QR\$CR2 #Q\$CSEL,-(SP) #<Q\$LBD+Q\$LBP>,(SP) MOV 012746 052716 283 000702 000360 MOV 204 000706 001001 BIS 000712 000716 000720 205 052716 036000 818 #<Q\$RNC+Q\$CNC>,(SP) 286 005046 CLR -(SP):SET-NOTHING-207 CALL CSR1 208 209 210 WAIT-FOR-A-TIME 211 000724 212 000730 213 000732 214 000734 215 000736 012701 000144 MOV #100..R1 :L00P-100 TIMES-005002 060202 CLR R2. R2.R2 : ADD - NOTHING 45; ADD 005301 DEC Pi BNE 4\$ 216 217 000746 005046 CLR -(SP) :CLEAR - NOTHING - IN - CSR1 218 000742 176000 012746 MOV-#0\$NCLK,-(SP) :SET-NO-CLOCKS 219 000746 CALL CSR4 220 000752 005067 CLR OR#CR2 ;SET LOAD MODE. 221 000756 000762 222 011666 000002 MOV: (SP).2(SP):MOVE RETURN ADDRESS DOWN STACK 223 224 005726 $(SP) \pm$:POINT TO RETURN ADDRESS 000764 RETURN 225 226 000001 .END

PPSUB-

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PPSUB: MACRO M1110 27-MAR-80 15:26 PAGE 9-2. SYMBOL TABLE Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
ALUCKE = · 040000
                                 BYTE42= 000052
                                                                  BYTE94= .000136
                                                                                                   PLR.EN= 000200
ALUOE = 004000
A01 = 010000
                                                                                                                                    Q$RDMD≈ 000006
                                 BYTE43= 0000053
                                                                  BYTE95= 000137
                                                                                                   PPCR
                                                                                                              000244RG
                                                                                                                              002 · Q$REBK = · 001000
002 · Q$RNC · = · 006000
                                 BYTE44= 000054
                                                                  BYTE96= 000140
                                                                                                   PPLB
                                                                                                              000174RG
BITVAL = 000000
                                                                  BYTE97= 000141
                                 BYTE45= 0000055
                                                                                                   QR$CR1=-176420
                                                                                                                                    Q#RSC - 004000
BIT0 = 000001
BIT1 = 000002
                                 BYTE46=-000056
BYTE47=-000057
                                                                  BYTE98= 000142
                                                                                                   QR$CR2= 176422
QR$LBR= 176424
                                                                                                                                    Q$RSET= 000010
                                                                  BYTE99 = . 000143
BYTVAL = . 000144
                                                                                                                                    Q$SM = 100000
Q$SP = 000120
                                 BYTE48= 000060
                                                                                                   Q$ATTN= 000100
BIT11 = 004000
                                 BYTE49= 000061
                                                                  CBKALL = . 001000
                                                                                                   Q$BCL -- 000001
Q$CCCP- 000040
                                                                                                                                    Q$SP2 = 000340
BIT12 -- 010000
                                 BYTE5 = 000005
                                                                  CBKCLK = . 000400
                                                                                                                                    RGQ.EN= 000200
BIT13 = 020000
                                 BYTE50 = . 000062
                                                                  CHOBRE = 100000
                                                                                                   Q$CHB - 000400
                                                                                                                                    RGQ.VA= 020000
SELPG 000326RG
SEQCS = ******* GX-
BIT14 = 040000
BIT15 = 100000
                                 BYTE51= 000063
                                                                  CPCCEN=-010000
CPCR- =-********* GX-
                                                                                                   Q$CHRL= 000200
                                                                                                                                                                002
                                 BYTE52= 000064
                                                                                                   Q$CLR·=·000040
Q$CNC·=·030000
Q$CP·=·000060
BIT2 - 000004
                                 BYTE53= 0000065
                                                                  CPREAD = . 040000
                                                                                                                                    SEQMM = жжжжжж GX
BIT3
        - 000010
                                 BYTE54= 000066
                                                                  CPWRTE = - 020000
                                                                                                                                    SEQ.CI= 000040
S$CLR = 000000
BIT4
        = 000020
                                 BYTE55= 000067
                                                                  CSADRD=-000004
                                                                                                   Q$CPCC= 000010
        = 000046
BIT5
                                 BYTE56= 000070
BYTE57= 000071
                                                                  CSEQCI = 100000
                                                                                                   Q$CP2 -- 000260
Q$CSC -- 010000
                                                                  CSOE: =:000040
CSRI =:********* GX:
                                                                                                                                    S$LA
BIT6
        = 000100
                                                                                                                                    S$0B
                                                                                                                                           = 0000005
         = 000200
                                 BYTE50= 000072
                                                                                                   Q$CSEL = . 000360
                                                                                                                                    <del>S$</del>OR<del>----</del> 000006-
S$OX = 000004
S$6R = 000007/
        = · 000400
= · 001000
BIT8
                                 BYTE59= 000073
                                                                  CSWRTE = - 000100
                                                                                                   Q$CSET= 0000002
Q$CSP -= 020000
Q$DMA -= 000001
BIT9
                                 BYTE6 = 000006
                                                                  DATAI = ****** GX
                                 BYTE60= 000074
BYTE0 = 000000
                                                                  DBR:RD=-000001
                                                                                                                                    S$S1
                                                                                                                                           = :000010
BYTE! = 000001
                                 BYTE61= 000075
                                                                  DB$CPP= 001457
DB$SPT= 000026
                                                                                                   Q$ENBK = . 040000
                                                                                                                                           ÷,000014
                                                                                                                                    9,492
                                                                                                                                    TD$CTR= 176370
TD$CTW= 176360
TD$INL= 004000
TD$MEM= 000270
BYTE10=-000012
                                 BYTE62= 000076
                                                                                                   Q$ENOP= 020000
BYTE11= 000013
                                 BYTE63=.000077
                                                                  DB$TPC= 000023
                                                                                                   Q$FAL - = - 004000
BYTE12= 000014
                                 BYTE64= 000100
BYTE65= 000101
                                                                  DISPGS = 100000
                                                                                                   Q$FC = 000045
BYTE 13= 0000015
                                                                                                   Q$F0 = 000044
Q$FP = 000045
Q$HBF = 000002
                                                                  DMAAWR = . 000005
BYTE14= 000016
BYTE15= 000017
                                 BYTE66= 000102
                                                                  DMARRD = - 000003
                                                                                                                                    TD$0AR= 176344
                                 BYTE67= 000103
                                                                  DMARWR = . 000004
                                                                                                                                    TD$OTR= 176346
BYTE16=-000020
                                 BYTE68= 000104
                                                                  EFN:3 = 000003
                                                                                                   0$ICP -- 000002
                                                                                                                                    TD$QRD= 000274
TD$SW = 176376
BYTE17= 000021
BYTE18= 000022
                                 BYTE69= 000105
                                                                                                   Q$IHB -- 000003
                                                                  ENSR: =:010000
                                                                  LBPP
                                 BYTE7 = 000007
                                                                                             002.Q$IHRL=.000002
002.Q$IMRP=.000007
                                                                             000000RG
                                                                                                                                    TD$TAR= 176372
BYTE19= 000023
                                 BYTE70= 000106
BYTE71= 000107
BYTE72= 000110
                                                                  LBPSC
                                                                             000076RG
                                                                                                                                    TD$TAW= . 176362
BYTE2 - = - 0000002
                                                                  LOC.EN= 000100
LOC.WA= 040000
LOC.WB= 100000
                                                                                                   Q$LBD -- 001000
                                                                                                                                    TD$TDR= 176374
BYTE20= 0000024
                                                                                                   Q$LBDP- 001001
Q$LBP--000001
                                                                                                                                    TD$TDW≕ 176364
BYTE21= 0000025
                                 BYTE73=-000111
                                                                                                                                    T$AD
BYTE22= 000026
                                 BYTE74= 000112
BYTE75= 000113
                                                                  MAREN1 = . 000001
                                                                                                   Q$LDCD=-000003
                                                                                                                                           = .000002
                                                                                                                                    T$BA
BYTE23= 000027
                                                                  MAREN2= 004000
                                                                                                   Q$LDMD= 000004
                                                                                                                                            = 000010
                                                                                                                                    JT$BD
BYTE24= 000030
                                 BYTE76= 000114
                                                                  MARLOD = 010000
                                                                                                                                    7$B$Q·≅·1000010
T$B$T`=:000020
                                                                                                   Q$LDPP=-002000
BYTE25= 000031
                                 BYTE77= 000115
                                                                  MAROUT = . 000002
                                                                                                   Q$LHP - = - 010000
Q$MNC - = - 140000
BYTE26= 000032
                                 BYTE78= 000116
                                                                  MAR.LO= 002000
                                                                                                                                    T$BTAR= 000030
BYTE27= 0000033
                                 BYTE79= 000117
                                                                  MAR.OU= 000040
                                                                                                   0$MR · = · 000052
                                                                                                                                    T$BTD·≕.002000
BYTE28= 000034
BYTE29= 000035
BYTE3 = 000003
                                 BYTE8 = 000010
                                                                  MBKALL= 001000
                                                                                                   Q$MRP - - 000040
                                                                                                                                          = 000100
                                                                                                                                    T$CD
                                 BYTE80= 000120
BYTE81= 000121
                                                                  MBKCLK = · 000400
                                                                                                   Q$MRP2=.000240
O$MSC.=.040000
                                                                                                                                    T$CLK -= -
                                                                  MMADRD= 000100
MMLEFT= 000002
MMDE = 000004
                                                                                                                       T$DRD = 000200
BYTE30= 000036
                                 BYTE82= 000122
                                                                                                   Q$MSET= 000004
Q$MSET= 100000
Q$MCLK= 176000
Q$PP = 000100
                                 BYTE83= 000123
BYTE84= 000124
BYTE31 = - 000037
                                                                                                                                    T$EMEM= . 010000
BYTE32= 0000046
                                                                  MMWRTE = . 000010
                                                                                                                                    T$F$AA= 000000
BYTE33= 000041
                                                                  MNOBRE = 100000
MREN1 = 000001
MREN2 = 020000
                                 BYTE85= 000125
                                                                                                   Q$PP = 000100
Q$PPSW= 000320
Q$PP2 = 000300
                                                                                                                                    T$FSAB= 000004
BYTE34= 000042
                                 BYTE86=-000126
                                                                                                                                    T$FSAC= 000014
BYTE35= 000043
                                 BYTE87 = . 000127
                                                                                                                                    T$F$B2=-000010
T$IB =-000026
BYTE36= 000044
                                 BYTE88= 000130
                                                                  MRPCR - = · ********* GX ·
                                                                                                   Q$QHLT= 0000013
BYTE37= 0000045
                                                                  MSYN = 000040
                                 BYTE89= 000131
                                                                                                   Q$QL · = · 000043
                                                                                                                                    T$IBAR=.000024
BYTE38= 000046
BYTE39= 000047
                                 BYTE9 = 000011
                                                                          = 000144
                                                                                                   Q$QLA---000053
                                                                                                                                    T$IBE - = - 020000
                                 BYTE90= 000132
                                                                                                   Q$QLB.=.000054
Q$QLR = 000001
                                                                  PLa
                                                                          = .000010
                                                                                                                                   T$18F = 040000
T$1CD = 000040
BYTE4 = 0000004
                                BYTE91=:000133
                                                                  PLC:
                                                                          = 000020
BYTE40= 000050
                                BYTE92= 000134
                                                                  PLD.
                                                                          = 0000030
                                                                                                   Q$QW- =-000042-
                                                                                                                                    T$MODE = . 004000
BYTE41= 000051
                                 BYTE93= 000135
                                                                  PLRWR - = -
                                             000135 PLRUR = 000200 0$RDCD = 000005
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                                                                                                                                           = 000036
                                                                                                                                    T$0B
```

```
T$0BE - = - 004006
                                  WORD15= 000036
                                                                    WORD37=-000112
                                                                                                     WORD59=-000166
WORD6 =-000014
WORD60=-000170
                                                                                                                                       WORD80=-000240
T$0BF·=·010000
                                  WORD16= 000040
                                                                   WORD38= 000114
WORD39= 000116
                                                                                                                                       WORD81= 000242
WORD82= 000244
T$0BRA= · 000034
T$0BWA= · 000032
                                  WORD17= 000042
                                 WORD18=-000044
WORD19=-000046
WORD2-=-000004
                                                                    WORD4 = 000010
                                                                                                     WORD61= 000172
WORD62= 000174
                                                                                                                                       WORD83= 000246
T$0UTA= · 100000
                                                                   WORD40= 000120
WORD41= 000122
T$RBDO= 000206
T$RBD = 000206
T$RNB = 000048
T$RSET= 040006
T$C = 000022
                                                                                                                                       WORD84= 000250
                                                                                                     WORD63= 000176
                                                                                                                                       WORD85= 000252 ∺ ≠0
WORD86= 000254
                                  WORD20= 000050
                                                                   WORD42= 000124
                                                                                                     WORD64= 000200
                                 WORD21= - 000052
                                                                    WDRD43= 000126
                                                                                                     WORD65 = . 000202
                                                                                                                                       WORD87= 000256
                                                                   WORD44= 000130
WORD45= 000132
                                  WORD22= 000054
                                                                                                     WORD66= 000204
                                                                                                                                       WORD88≈ 000260
T$SCLK= 020006
                                  WORD23= 000056
                                                                                                     WORD67= 000206
                                                                                                                                       WORD89= 000262
WORD9 = 000022
T$SEG!=-000000
T$SEG2=-000001
                                  WORD24= 000060
                                                                   WORD46 = 000134
                                                                                                     WORD68=-000210
WORD69=-000212
WORD7 =-000016
                                  WORD25-000062
                                                                    WORD47 = 000136
                                                                                                                                       WORD90= 000264
T$SEG3=-000002
                                  WORD26=-000064
                                                                   WORD48=-000140
                                                                                                                                       WORD91= 000266
                                                                   WORD49= 000142
WORD5 = 000012
T$SO - - 000001
T$UBUS - 100000
                                  WORD27= 000066
                                                                                                     WORD70= 000214
                                                                                                                                       WORD92=-000270
                                  WORD28=-000070
                                                                                                     WORD71=-000216
WORD72=-000220
WORD73=-000222
                                                                                                                                       WORD93= 000272
T$1CLK=-000406
                                 WORD29= 000072
WORD3 = 000006
                                                                    WORD50= 000144
                                                                                                                                       WORD94= 000274
T$8BEN= · 000020
                                                                   WORD51= 000146
WORD52= 000150
WORD53= 000152
UBD.IN= 000020
WORD0 = 000000
WORD1 = 000002
                                                                                                                                       WORD95= 0002
                                  WORD30= 0000074
                                                                                                                                      ₩0₹096-2000300
WORD97- 000302
WORD98- 000304
                                                                                                     WORD74= 000224
                                 WORD31= 000076
WORD32= 000100
WORD33= 000102
                                                                                                     WORD75 - 000226
                                                                   WORD54= 000154
                                                                                                     WORD76=-000230
WORD77=-000232
WORD10= 000024
                                                                   WORD55= 000156
                                                                                                                                       WORD99 - 000306
WORD11=-000026
WORD12=-000030
                                  WORD34= 000104
                                                                   WORD56=-000160
WORD57=-000162
                                                                                                     WORD78 = . 000234
                                                                                                                                       WRDVAL = 000310
                                 WORD35=-000106
WORD36=-000110
                                                                                                     WORD79= 000236
                                                                                                                                       XTREAD= 001000
WORD13= 000032
                                                                   WORD58 - 000164
                                                                                                     WORD8 = 000230
                                                                                                                                       XTWRTE = . 000400
WORD14= 0000034
. ABS.
           000000
                          000
           000000
                           001
                                                                                                                                           `~;;·
                                                                                                                                                1
PPSUB.
           000766
                          002
ERRORS DETECTED:
                        0
VIRTUAL MEMORY JSED: 3288 WORDS (13 PAGES)
DYNAMIC MEMORY: 3860 WORDS (14 PAGES)
ELAPSED TIME: 00:00:46
```

PPSUB, PPSUB/-SP-E 20, 1 JIM, E 20, 1 JPPSUB

35 36

.TITLE MRP ...

HARDWARE QUERY RESOLVER MANUAL DEBUGGING AIDS MATCH REPORT PROCESSOR ROUTINES

PARSE THE COMMAND LINE AND TRANSFER CONTROL TO ONE OF THE MRP SUB-MODULES OR BACK TO OMAIN, CONTROL COULD HAVE BEEN PASSED TO MRP IN ONE OF THREE WAYS:

1. FROM OMAIN IF MRP WAS SELECTED AS THE FIRST PROCESSOR UPON ENTRY TO THE PROGRAM.

MR LD MD 0

- FROM QMAIN IF MRP WAS SELECTED FROM ONE OF QMAIN'S OTHER SUB-MODULES.

 CP>MR LD MD 0

 ON RETURN FROM ONE OF MRP1S SUB-MODULES
- MR>LD MD 0

MRP PARSES AT THE SECOND LEVEL OF CONTROL (SEE NOTES AT QMAIN ON LEVELS OF CONTROL). IN THE EXAMPLES ABOVE, MRP WOULD PARSE 'LD' AND TRANSFER CONTROL TO THE MRP SUBMODULE MRLD, IF MRP SHOULD ENCOUNTER A STRING WHICH IS NOT A VALID COMMAND MNEMONIC, MRP CONSIDERS THE STRING TO BE A PROCESSOR MNEMONIC AND RETURNS CONTROL TO OMAIN: EGG! MRYCP-LD CS 0

THE STRING 'CP' IS NOT A VALID MRP (SECOND TEVEL) COMMAND MRP RETURNS CONTROL TO OMAIN WHICH THE TURN WILL; TRANSFER CONTROL TO ITS SUB-MODULE CP.

MRP SUB-MODULES: MRLD LOAD MEMORIES

MRPR

PRINT: MEMORY: CONTENTS: REMAINING: COMMANDS: (EXCEPT: DEBUGGING) DEBUGGING: COMMANDS: MRREST.

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```
MACRO M1110 27-MAR-80 15:11 PAGE 6
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MRP ..
     39
40
41
42
43
44
45
46
47
                                                             TABLE OF MRP COMMAND MNEMONICS AND THEIR ASSOCIATED ROUTINE
                                                             ADDRESSES.
         000000
000000
                                                  MRTBL:
                        101
                                  124
                                                             .ASCII
                                                                       ZATZ
                                                                                           :SET-BREAKPOINT-
          0000002
                    000000G
                                                             .WORD.
                                                                       AT1
      48
          000004
                                  106
                                                                       /0F/
                                                                                           :DISABLE BREAKPOINT
      49
50
51
         000006
000010
                    000000G
                                                             .WORD
                                                                       OF 1
                                  123
                        123
                                                             .ASCII
                                                                       288z
                                                                                           ;SINGLE · STEP ·
          000012
                    000000G
                                                             .WORD
.ASCII.
.WORD
                                                                       SS 1
      52
53
          000014
                                  117
                                                                      /GO/
GO1
                                                                                           :PROCEED FROM BREAKPOINT
         000016
000020
                    000000G
                        123
                                  124
                                                             .ASCII
                                                                       ZSTZ
                                                                                           :STORE · INTO · A · REG ·
          000022
                    000000G
                                                             .WORD
      56
57
         000024
000026
                                  105
                                                                       /RE/
                                                                                           :READ - FROM - A - REG
                    000000G
                                                             .WORD
                                                                       REI
          000030
                                  104
                        114
                                                             .ASCII
                                                                                           :LOAD MEMORY
                    000000G
      59
          000032
                                                             .WORD
                                                                       LD1
      60
61
         000034
000036
                        120
                                  122
                                                                       /PR/
                                                                                           :PRINT-FROM-MEMORY
                    000000G
                                                             .WORD
                                                                       PR1
      62
63
64
65
          000040
                        122
                                  123
                                                             .ASCII
.WORD
.ASCII
                                                                                           :RESET-
          000042
                    000000G
                                                                       RS1
          000044
                    103
000000G
                                  114
                                                                       Z01.2
                                                                                           :CALL QR LOADER
          000046
                                                             .WORD
                    000012
                                                  MRNUM-
                                                                       <.-MRTBL>/4
```

THE PROPERTY

MRP.

```
MACRO - 1110 27-MAR-80 15:11 PAGE 7-1
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SYMBOL TABLE
ALUCKE = . 04000E
                                BYTE4 = 000004
                                                                 BYTE91= 000133
BYTE92= 000134
                                                                                                 MREN2 - # - 020000
                                                                                                                                 Q$NCLK= 176000
ALUOE: =: 004000
AT1 =: ******* GX
                                BYTE40= 000050
                                                                                                 MRNUM - 000012
                                                                                                                            Q$PP = 000100
002 Q$PPSW= 000320 \^\
                                                                 BYTE93= 000135
                                BYTE41= 000051
                                                                                                            000050RG
                                                                                                           000130RG:
                                                                 BYTE94= 000136
        = 010000
                                BYTE42= 000052
                                                                                                 MRPXX:
                                                                                                                            002.0$PP2.=.000300
                                                                                                                            002 Q$QHLT= 000013
Q$QL = 000043
BASE
       = · ****** GX ·
                                BYTE43 = . 000053
                                                                 BYTE95= 000137
                                                                                                 MRTBL - - - 0000000R
81TVAL= 0000000
                                BYTE44= 000054
                                                                 BYTE96= : 000140
                                                                                                 MSYN - 000040
N - 000144
                                BYTE45= 000055
                                                                 BYTE97 = . 000141
       = 0000001
BITA
                                                                                                                                 Q$QLA = 000053
Q$QLB = 000054
                                BYTE46 = 000056
                                                                 BYTE98= 000142
BITI
                                                                                                        _=_ жжжжжж GX-
                                BYTE47 = · 000057
                                                                                                         = 000010
= 000020
BIT10
        = 002000
                                                                 BYTE99= 000143
                                                                                                                                 Q$QLR - = - 000001
                                BYTE48 = . 000060
                                                                 BYTVAL = 000144
CBKALL = 001000
BITIL
        - 004000
                                                                                                 PLC.
                                                                                                                                 Q$Q₩
                                                                                                                                         =·000042
BIT12
                                BYTE49= 0000061
                                                                                                         = . 000020
          010000
                                                                                                 PLD
                                                                                                                                 Q$RDCD= 000005
                                                                 CBKCLK = . 000400
BITi3
       --020000
                                BYTE5 - 000005
                                                                                                 PLRWR - - 000200
                                                                                                                                 Q$RDMD=-000006
        = 040000
                                BYTE50= .000062
                                                                                                                                 Q$REBK=-001000
Q$RNC-=-006000
Q$RSC-=-004000
BIT14
                                                                                                 PLR:EN= 000200
PR1 = ********* GX
                                                                 CL 1
                                                                         = · ****** GX
BIT15
           100000
                                BYTE51 = 000063
                                                                 CNOBRE = 100000
                                BYTE52= 000064
                                                                                                 QR$CR1= 176420
BIT2
        = 000004
                                                                 COMXX- = - ****** GX
        = 000010
                                BYTE53= 000065
BITE
                                                                 CPCCEN= 010000
                                                                                                 QR$CR2= . 176422
QR$LBR= . 176424
                                                                                                                                 Q$RSET= 000010
        = 000020
                                BYTE54= 0000066
                                                                 CPREAD = . 040000
BIT4
                                                                                                                                 0$SM = .
Q$SP =
                                                                                                                                            100000
⊎1T5
        = 000040
                                BYTE55= 000067
                                                                 CPWRTE = . 020000
                                                                                                 Q$ATTN= 000100
                                                                                                                                 Q$SP
                                                                                                                                            000120
        = 000100
= 000200
                                BYTE56=-000070
BYTE57=-000071
                                                                                                 Q$BCL -- 000001
Q$CCCP- 000040
                                                                                                                                 Q$SP2 = 000340
RF1 = ******* GX
BIT6
                                                                 CSADRD = 0000004
                                                                 CSEQCI = 100000
CSOE · = 000040
BITZ
BITS
        = . 000400
                                BYTE58=-000072
                                                                                                 Q$CHB - = - 000400
                                                                                                                                 RGQ.EN= 000200
                                                                                                 0$CHRL= 000200;
0$CLR = 000040
        --001000
                                BYTE59=-000073
                                                                 CSWRTE = 000100
                                                                                                                                 RGQ.VA= 020000
BREAK - - ******* GX
                                                                                                                                        BYTE6 = .000006
                                                                 DBR.RD= 000001
                                                                                                                                 R$1
BYTE0 = 000000
                                BYTE60= 000074
BYTE61= 000075
                                                                                                 Q$CNC -= 030000
Q$CP -= 000060
                                                                 DB$CPP=-001457
                                                                                                                                 SCAN
BYTE1 = 000001
                                                                 DB$SPT= 000026
                                                                                                                                 SEQ.CI= 000010
BYTE10=-000012
                                BYTE62= 000076
                                                                 DB$TPC= 000023
                                                                                                 Q$CPCC= 000010
                                                                                                                                         = - *****
                                                                                                                                 SSI
                                                                                                 Q$CP2 -- 000260
Q$CSC -- 010000
Q$CSEL -- 000360
BYTE11= 000013
                                BYTE63= 000077
BYTE64= 000100
                                                                 DISPGS=-100000
                                                                                                                                  STI
BYTE12= 000014
                                                                 DMAAUR = . 000005
DMARRD = . 000003
                                                                                                                                 S$CLR -- 000000
S$LA = 000001
BYTE13= 000015
                                BYTE65= 000101
                                                                                                 Q$CSET=-000002
Q$CSP-=-020000
BYTE14= 000016
                                 BYTE66= 000102
                                                                 DMARWR = . 000004
                                                                                                                                  S$QB
                                                                                                                                         = . 000005
BYTE15= 000017
                                 BYTE67=-000103
                                                                 ENBR: =:010000
                                                                                                                                  S$0R
                                                                                                                                            000006
BYTE16=-000020
BYTE17=-000021
                                BYTE68= 000104
                                                                 ERR12 -- ****** GX
                                                                                                 Q$DMA - = - 000001
                                                                                                                                  S \$ 0 \times
                                                                                                                                            000004
                                                                                                 Q$ENBK = 040000
Q$ENOP = 020000
                                BYTE69= 000105
BYTE7 = 000007
                                                                 ERR4 = - жжжжжж GX
                                                                                                                                  S≸SR
                                                                                                                                            000007
BYTE18= 000022
                                                                 ERR8
                                                                        = · ****** GX
                                                                                                                                  9:69.1
                                                                                                                                            000010
                                                                         = - **********
                                 BYTE70= 000106
                                                                                                 Q$FAL - = - 004000
                                                                                                                                          = .000014
BYTE19= 000023
                                                                 FIND
                                                                                     GΧ
                                                                                                                                  S$S2
BYTE2 - = - 000002
                                 BYTE71=-000107
                                                                 GCMBLK = · *****
                                                                                                  Q$FC· = 000045
                                                                                                                                  TD$CTR= 176370
                                BYTE72=-000110
BYTE73=-000111
                                                                 Q$F0 - 000044
Q$FP - 000046
BYTE20 = . 000024
                                                                                                                                  TD$CTW= 176360
BYTE21=-000025
                                                                                                                                  TD$INL= 004000
BYTE22= 000026
                                 BYTE74= 000112
                                                                 G.DPRM= ********
                                                                                                  Q$HBF -
                                                                                                         = 0000002
                                                                                                                                  TD$MEM= 000270
                                                                                                 Q$ICP:=:000002:
Q$ICP:=:000006:
Q$IHB:=:000003
Q$IHRL=:000002:
                                BYTE75=-000113
BYTE76=-000114
BYTE23= 0000027
                                                                         TD$OAR= · 176344
                                                                 LOC.EN= 000100
LOC.WA= 040000
LOC.WB= 100000
MAREN1= 000001
MAREN2= 004000
BYTE24= . 000030
                                                                                                                                  TD$0TR=-176346
BYTE25= 000031
                                 BYTE77= 000115
                                                                                                                                  TD$QRD= 000274
TD$SW = 176376
 BYTE26= 000032
                                 BYTE78= 000116
                                                                                                  Q$IMRP= 000007
BYTE27= 000033
BYTE28= 000034
                                 BYTE79= 000117
BYTE8 = 000010
                                                                                                 Q$LBD - = .001000
Q$LBDP = .001001
                                                                                                                                  TD$TAR= . 176372
                                                                                                                                  TD$TAU= 176362
BYTE29 - 000035
BYTE3 - 000003
                                 BYTE80= 000120
BYTE81= 000121
                                                                 MARLOD= 010000
MAROUT= 000002
                                                                                                  Q$LBP·=·000001
                                                                                                                                  TD$TDR=.
                                                                                                                                             176374
                                                                                                 Q$LDCD=.000003
Q$LDMD=.000004
                                                                                                                                  TD$TDW= · 176364
                                                                 MAR.LO= 002000
 BYTE30= 000036
                                 BYTE82= 000122
                                                                                                                                  T$AD = 000020
 BYTE31= .000037
                                 BYTE03=-000123
                                                                 MAR.OU= 0000040
                                                                                                  Q$LDPP= 002000
                                                                                                                                  T$BA
                                                                 MBKALL= 001000
MBKCLK= 000400
MMADRD= 000100
                                                                                                 Q$LHP. = .010000
Q$MNC. = .140000
BYTE32=-000040
                                 BYTE84= . 000124
BYTE33= 000041
                                 BYTE85 = . 000125
                                                                                                                                   [$B$0·=
                                                                                                                                             100000
                                 BYTE86= 000126
BYTE34= 0000042
                                                                                                  D$MR -
                                                                                                 Q$MR = 000052
Q$MRP 000040
                                                                                                                                   ŤΦRΤ.

    คคคคคค

BYTE35= 000043
                                 BYTE87= 000127
                                                                 MMLEFT= 000002
                                                                                                                                  T$BTAR = : 000030
                                                                                                  0$MRB3.= ,6002,40
0$MSC = 040000
                                                                                                                                  T$BTD~=~000000
T$CD = 000100
BYTE36=-000044
                                 BYTE98= 000130
                                                                         =·000004
                                                                 MMWRTE = 000010
MNOBRE = 100000
MREN1 = 000001
                                BYTE89= 000131
BYTE9 = 000011
BYTE37= 900045
                                                                                                 Q$MSET= 000004
Q$MSP = 100000
BYTE38= 000046
                                                                                                                                  T$CLK - - 002000
BYTE39= 000047
                                 BYTE90=-000132
                                                                                                                                  T$DISK≕.000200
                                                                                        IA-RDP85-00514R000200020001-3
                                            Approved For Release 2005/07/12
```

MRP --

```
Mark to the Assemble
                                                                                                                  0 M1110 27-MAR-80 15:11 PAGE 7-2
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MRP.
SYMBOL . TA
T$DRD - = - 000004
                                  T$UBUS= · 100000
T$1CLK= · 000400
                                                                    WORD3 = 000006
                                                                                                     LIORD54= : 000154
                                                                                                                                       WORD79= 00029
T$EMEM= . 010000
                                                                    WORD30= 000074
WORD31= 000076
                                                                                                     WORD55= 000156
                                                                                                                                       WORD8 = 000020
WORD80='000240
T$FSAA=-000000
                                  T$8BEN=∙000020
                                                                                                     WORD56= 000160 _.
T$F$AB= 000004
                                  UBD: IN= 000020
                                                                    WORD32= 000100
                                                                                                     WORD57= 000162
                                                                                                                                       WORD81 = . 000242
T$FSAC= 000014
                                 WORD0 = 000000
WORD1 = 000002
                                                                    WORD33=-000102
                                                                                                     WORD58= 000164
                                                                                                                                       WORD82= 000244
T$FSB2=-000010
                                                                    WORD34--000104
                                                                                                     WORD59= 000166
WORD6 = 000014
                                                                                                                                       .WORD83= 000246
T$IB - - 000026
                                  WORD10= 000024
                                                                    WORD35= 000106
WORD36= 000110
T$IBAR = 000024
T$IBE = 020000
T$IBF = 040000
T$ICD = 000040
T$MODE = 004000
                                                                                                                                       WORD84= 000250
                                  WORD11= 000026
                                                                                                      WORD60= 000170
                                                                                                                                       WORD85= 000252
WORD86= 000254
                                  WORD12=-000030
                                                                    WORD37= 000112
                                                                                                     WORD61=-000172
WORD62=-000174
WORD63=-000176
                                  WORD13= 000032
                                                                    WORD38= 000114
                                                                                                                                       WORD87=
                                                                                                                                                  000256
                                  WORD14= 000034
                                                                    WORD39=-000116
WORD4 =-000010
                                                                                                                                       WORD88= 000260
WORD89= 000262
                                  WORD15= 000036
WORD16= 000040
                                                                                                     WORD64= 000200
T$08. = 000036
T$08E. = 004000
T$08F. = 010000
                                                                    WORD40= 000120
WORD41= 000122
                                                                                                     WORD65= 000202
                                                                                                                                       WORD9 = 000022
                                  WORD17= 000042
                                                                                                     WORD66= 000204
                                                                                                                                       WORD90=-000264
                                  WORD18= 000044
                                                                    WORD42= 000124
                                                                                                                                       WORD91=-000266
WORD92=-000270
                                                                                                     WORD67= 000206
T$0BRA= 000034
                                  WORD19= 000046
WORD2 = 000004
                                                                    WORD43 = 000126
                                                                                                     WORD68= 000210
T$0BWA= 000032
                                                                   WORD44= 000130
WORD45= 000132
WORD46= 000134
                                                                                                     WORD69= 000212
                                                                                                                                       WORD93 = 000272
WORD94 = 000274
T$0UTA=-100000
                                  WORD20=-000050
                                                                                                     WORD7 = 000016
WORD70= 000214
T$RBD0=-000200
T$RNB-=-000040
T$RSET=-040000
                                  WORD21= 000052
                                                                                                                                       WORD95=-000276
                                 WORD22=-000054
WORD23=-000056
                                                                    WORD47= 000136
                                                                                                     WORD71=-000216
WORD72=-000220
WORD73=-000222
                                                                                                                                       WORD96= 000300
                                                                    WORD48= 000140
                                                                                                                                       WORD97=-000302
T$SC: =:000022
T$SCLK=:020000
T$SEG!=:000000
                                  WORD24= 000060
                                                                   WORD49= 000142
WORD5 = 000012
WORD50= 000144
                                                                                                                                       WORD98= 000304
                                  WORD25= 000062
                                                                                                      WORD74= 000224
                                                                                                                                       WORD99≈ 000306
                                  WORD26= 000064
                                                                                                     WORD75= 000226
                                                                                                                                       WRDVAL = . 000310
T$SEG2= 0000001
                                 WORD27= 0000066
WORD28= 000070
                                                                   WORD51=-000146
WORD52=-000150
WORD53=-000152
                                                                                                     WORD76=-000230
WORD77=-000232
                                                                                                                                       XTREAD=:001000
T$SEG3=.000002
                                                                                                                                       XTWRTE = 000400
T$SO: =:000001
                                  WORD29= 000072
                                                                                                     WORD78 = . 000234
. ABS:
           000000
                          000
           000000
                           001
MRP
           000226
                          002
ERRORS DETECTED:
                         0
VIRTUAL·MEMORY·USED:
                              3151 WORDS: (:13 PAGES)
DYNAMIC MEMORY: 3860 WORDS ( 14 PAGES)
ELAPSED TIME: 00:00:41
mRP,MRP/-SP=[20,1]IM,[20,1]MRP
```

```
0 M1110 27-MAR-80 15 Approved For Release 2005/07/12 LIA-RDP85-00514R000200020001-3
MRLD - · ·
                                                                   .FITLE - - MRLD
                                                                   .PSECT: MRLD
          000000
        234567
                                                                   HARDWARE QUERY RESOLVER 'MANUAL' DEBUGGING AIDS MATCH REPORT PROCESSOR ROUTINES.
                                                                   COMMANDS:
        8
                                                                              LOAD MRP-MEMORIES.
       10
                                                                   ONCE A COMMAND HAS BEEN EXECUTED (OR AN ERROR ENCOUNTERED) THIS MODULE RETURNS CONTROL TO THE MODULE MRP AT LOCATION
       11
       12
                                                                    'MRPXX'.
        13
        14
        15
                                                                   .MCALL: WTSE$S,RDAF$S,CLEF$S:
        16
17
       TABLE OF VALID MRP MEMORY MNEMONICS AND ADDRESSES OF
                                                                   ASSOCIATED ROUTINES
                                                        LDITBL::
            000000
                                                                                                                :LOAD MICROPGM MEMORY
                                                                    .ascII.
                                                                              ZMMZ
                                       115
            000000
                                                                    .WORD
                                                                              LD1MM-
                       0002621
            000002
                                                                                                                ;LOAD DATA MEMORY AND TOTABLES)
                           115
                                                                              /MD/
                                       104
            000004
                                                                              LDIMD
                       000424
                                                                    .WORD
            000006
                                                                               <.-LD1TBL>/4
                        000002
                                                        LD1LN:
                                                                   LOAD
                                                                    PERFORM. THIRD. LEVEL. PARSING.
                                                                    EG. IN-THE-COMMAND:
MR>LD-MM-0
PARSE-THE-'MM'
        36
37
38
                                                         LD1::
             000010
                                                                                                                 :LOCATE - MEMORY - MNEMONIC - IN - COMMAND - LINE -
                                                                               FIND
                                                                    CALL
             000010
                                                                                                                :OK, CONTINUE:
: MISSING OPERAND:
                                                                    BCC
                                                                               1$
         39
             000014
                        103004
                                                                               ERR4
                                                                    CALL
         40
             000016
                        000167
                                   000644
                                                                    JMP.
                                                                               LDIX
         41
             000022
         42
                                                         ;
                                                                    MATCH - MNEMONIC - IN - COMMAND - LINE - AGAINST - TABLE - OF - VALID - MNEMONICS
         43
         44
                                                                                                                 :NUMBER OF TABLE ENTRIES
                                                                               #LD1LN.R0
                                                                    MOS
         45
                                   000002
                                                         1$:
             000026
                        012700
                                                                               #LD1TBL,R2
                                                                                                                 :POINT TO TABLE
                                                                    MOV
         46
             000032
                        012702
                                   000000
                                                                                                                 :MATCH - AGAINST - COMMAND - LINE
                                                                               SCAN
                                                                    CALL
         47
             000036
                                                                                                                 ; MATCH WAS MADE
                                                                    BCC
                                                                               2$
                        103004
         48
             000042
                                                                               ERR7
                                                                                                                 ; "INVALID MEMORY MNEMONIC"
         49
50
51
52
53
54
             000044
                                                                    CALL
                        000167
                                   000616
                                                                    SAVE POINTER TO ROUTINE ASSOCIATED WITH THE MEMORY MARMONIC SCAN THE REMAINDER OF THE COMMAND LINE FOR CONTROL TNFORMATION.
                                                                    1. START ADDRESS ONLY. REPEAT PROMPT FOR EACH MEMORY LOCATION FROM THE START ADDRESS FORWARD. NB. END OF MEMORY (AS DETECTED BY THE QMAIN SUBROUTINE PDATA) OR A <CR> RESPONSE TO THE PROMPT PASSE 2005/07/12: CIA-RDP85-00514R000200020001-3
         55
56
         57
                                              Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
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MRLD. . . MACRO . M1110 27-MAR-80 15:10 PAGE . 5-1
                                             Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
                                                                      WILL-TERMINATE-THE-LOAD.
       59
                                                                      MR>LD · MD · Ø
                                                                      START ADDRESS, LOOP INDICATOR, LOOP ON THE LOADING OF THIS ONE MEMORY LOCATION ONLY.
       60
      61
62
                                                                      START ADDRESS, END ADDRESS, NO LOOP, ISSUE ONLY ONE PROMPT AND FILL MEMORY (BETWEEN START AND END ADDRESSES) WITH THIS VALUE.

MR>LD MD 0 7
       63
      65
66
       67
                                                                      START ADDRESS, END ADDRESS, LOOP INDICATOR, ISSUE ONLY ONE-PROMPT AND LOOP ON THE LOADING OF MEMORY (BETWEEN START AND END ADDRESSES) WITH THIS VALUE.
      69
70
                                                                      MR>LD.MD.0 7 L.
       72
73
          000054
                      010167
                                 000000G
                                                                                                              :SAVE - POINTER -
:LOCATE - START - ADDRESS - IN - COMMAND - LINE
                                                                  MOV
                                                                             R1, RTHPT-
          000060
                                                                  CALL
                                                                             FIND
           000064
                      103004
                                                                  BCC
                                                                             3$
                                                                                                              ; OK, CONTINUE
       76
           000066
                                                                             ERR4
                                                                  CALL
                                                                                                                 MISSINGTOPERHAD
           000072
                      000167
                                                                  JMP
                                                                             LDIX
                                                                                                              :EXIT-
                                                                                                              EXIT COMMAND LIME VALUE TO BINARY CONVERTION SUCCESSFUL INVALID NUMERIC VALUE
       78
          000076
                                                       3$:
                                                                  CALL
                                                                             PACK
           000102
                      103004
                                                                  BCC
                                                                             4$
           000104
                                                                  CALL
                                                                             ERR5
      81
82
           000110
                      000167
                                 000556
                                                                  9ML
                                                                             LDIX
           000114
                      016767
                                 000000G · 000000G · 4$:
                                                                                                              :SAVE LOADING START ADDRESS SAVE IT TWICE (FOR REFRESH ON LOOP)
                                                                  MOV
                                                                             BINWD,MSTRT
       84
           000122
                      016767
                                 000000G · 000000G
                                                                  MOV
                                                                             BIHWD, MSTR2 +-1, MEND
       85
                      012767
           000130
                                                                                                              : INIT END ADDRESS
                                                                  87
       88
                                                                                                         COMPTTION 1 IS IN EFFECT.
       89
       90
       91
           000136
                                                                  CALL
                                                                             FIND
                                                                                                              :SCAN COMMAND LINE
           000142
                      103004
352767
                                                                  BCC
BIS
                                                                                                              ;SOME COMMINION THERE:
;SOMETHING THERE:
;SIGNAL.TO REPEAT.PROMPT:
;JUMP:TO:RTN:
                                                                             5$
                                                                             #RP,BASE
       93
           000144
                                 000000G-000000G
       94
           000152
                      000437
                                                                              9$
       96
           000154
                      122711
                                 000114
                                                                  CMPB
                                                                             #*L,(R1)
                                                                                                              :LOOP · INDICATOR
       97
           000160
                      001006
                                                                                                              NO. MUST-BE-UPPER ADDRESS:
SET-END-ADDR: = START-ADDR:
HOW TO-STOP-LOOP
                                                                  BNE
                                                                             6$
                                                                  MOV.
       98
          000162
                      016767
                                 000000G · 000000G
                                                                             MSTRT, MEND
       99
           666176
                                                                  CALL
                                                                             HANG
      100
           000174
                      000426
                                                                                                              JUMPATO RTH,
                                                                  BR
                                                                             9$
      101
                                                                                                             CONVERT UPPER ADDRESS
OK. CONTINUE
INVALID NUMERIC
      102
          000176
                                                       6$:
                                                                  CALL
                                                                             PACK
      103
          000202
                      103004
                                                                  BCC.
                                                                             7$
          000204
                                                                  CALL
                                                                             EPR5
      185
          000210
                      000167
                                 000456
                                                                             LDIX
                                                                                                              ;EXIT
      106
                                                                  \begin{tabular}{llll} SAVE+END+ADDRESS+(BINARY) \\ CHECK+FOR+LOOP+INDICATOR+AFTER+END+ADDRESS+(CONDITION+4) \\ \end{tabular}
      108
      109
                                                                            BINUD MEND SET UP END ADDRESS
FIND CHECK FOR LOOP INDICATOR
95 CORRECT INDICATOR
      110
          000214
                     016767
                                000000G-000000G-7$:
                                                                  MOV.
     111 000222
                                                                  CALL .
                      103411
122711
     112-000226
                                                                  BCS
     113 000230
                                 000114
                                                                  CMPB
     114 000234
                     001404
                                                                  BEQ
                                                                                       CIA-RDP85-00514R00020002000123
                                             Approved For Release 2005/07/12
```

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MRLD - . . M
                                                                                        To APPHILE THE
          70.M1110 27-MAR-80 15:10 PAGE:5-2.
                                    Approved For Release 2005/07/12 IA-RDP85-00514R000200020004
    115 000236
                                                      CALL
                                                               ERR11
                                                                                 :LOOP · OPTION · ERROR
    116 000242
                 000167
                          000424
                                                      JMP.
                                                               LD1X
    117
        000246
                                             8$:
                                                      CALL
                                                               HANG
                                                                                          :HOW-TO-STOP-LOOP
    118
        000252 016701
                          000000G
                                                      MOV.
                                             9$:
                                                               RTHPT,R1
                                                                                          :POINT-TO-ROUTINE
                                                                                 JUMP TO ROUTINE
    129
        000256
                 000171
                                                               @(R1)
    121
    122
                                                      LOAD MICROPGM MEMORY
    124
                                                               MMHIGH.-(SP)
    125
        000262
000262
                                             LD LMM::
                 016746
                          000000G
                                                                                          :SUPPLY-UPPER-MEMORY'UIMIT-
:LOWER-LIMIT-
:PREPARE-TO-LOAD-
                                                      MOV
    127
        000266
                  016746
                           000000G
                                                      MOV.
                                                               MMLOW, -(SP)
    128.000272
                                                      CALL
                                                               BUFS2 -
        000276
                  103002
                                                      BCC
                                                                                          :NO ERRORS, CONTINUE
    130
        000300
                  000167
                          000366
                                                      JMP
                                                               LD1X
    131
        000304
                  032767
                          000000G-000000G-100$:
                                                      BIT
                                                               #RP,BASE
                                                                                          ;REPEAT.PROMPT.;NO. ONCE.ONLY.
    133
        000312
                                                      BEQ
                                                               2$
    134
        000314
                                                      CALL
                                                               PDATA:
                                                                                          READ DATA FROM COMMAND LINE
    135
        000320
                  193992
                                                      BCC
                                                                                          :NOT END OF MEMORY
:IF END, EXIT
:<CR> RESPONSE
                                                               185
        000322
                 000167
                          000344
                                                      JMP
                                                               LDIX
    137
        000326
                  102002
                                                      BVC
JMP
                                             10$:
                                                               20$
    138
        000330
                 000167
                          000336
                                                               ! D4×
        000334
                                                      CALL
                                                               LOADMM.
                                                                                          :LOAD·MICRO·MEMORY·
:BUMP·TO·NEXT·ADDRESS·
    140
        000340
                 066767
                          000000G · 000000G
                                                      ADD:
                                                               INCVAL, MSTR2
    141
        000346
                 000762
                                                               1 $
                                                                                          :REPEAT
    142
    143
                                                      PROMPT ONCE THEM FILL MEMORY.
    144
    145
        000350
                                             2$:
                                                      CALL.
                                                               PDATA:
                                                                                          ;PROMPT.
    146
        000354
                  103002
                                                                                          NOT END OF MEMORY OR ERROR
                                                      вос.
                                                               30$
    147
        000356
                          000310
                 000167
                                                      JMP.
                                                               LD1X
    149
        000362
                                             30$:
                                                      CALL
                                                               LOADMM.
                                                                                          :LOAD·MICRO·MEMORY·
    150
        000366
                 066767
                          000000G-000000G-
                                                                                          ADVANCE ADDRESS
HAS UPPER MEMORY LIMIT BEEN REACHED
                                                      ADD.
                                                               INCVAL,MSTR2
    151
        000374
                 026767
                          000000G - 000000G
                                                      CMP
                                                               MSTR2, MEND
        000402
                 101767
                                                      BLOS
                                                               30$
                                                                                          ;NO, CONTINUE.
;LOOP.ON.
;NO, EXIT.
        000404
                 032767
                          000000G · 000000G ·
                                                               #LOOP,BASE
                                                      BIT.
                 001527
016767
    154 000412
                                                      BEO.
                                                               1.018
    155 000414
156 000422
                          000000G-000000G
                                                               MSTRT, MSTR2
                                                                                          :REINITIALIZE - ADDRESS
                 000757
    158
    159
                                                      LOAD · DATA · MEMORY ·
    160
        000424
                                             LD4MD::
    162 \cdot 000424
                 016746
                          000000G
                                                      MOV
                                                               MDHIGH,-(SP)
                                                                                          ;SUPPLY-UPPER-MEMORY LIMIT-
    163 000430
                                                               MDLOW, - (SP)
BUFSET
                 016746
                          000000G
                                                                                          :LOWER-LIMIT-
    164 000434
                                                      CALL
                                                                                          :PREPARE FOR LOAD ;
                                                                                          ERROR -
    165 000440
                 103514
                                                      BCS.
                                                               LDIX
        000442
                 012746
    167
                          000377
                                                      MOV.
                                                               #377,-(SP)
                                                                                          ;SET-MRP-MICRO-ADDRESS- - X:FF: (JUMP-SELF)
    168
        000446
                                                      CALL:
                                                               SEQMM-
    169
    170 000452
                 005046
                                                                                          :REINHIBIT BRANCH-CONTROL-REG
    171 000454
                                                      CALL:
                                                              MRPCR
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```

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     172-000460
                   005046
                                                              CLR-
                                                                         -(SP)
                                                                                                        :SINGLE-CLOCK-TO-REINHIBIT BRONCH REGISTER.
     173 000462
                                                              CALL
                                                                         LBMRP
     175
          000466
                    005046
                                                              CLR.
                                                                         -(SP)
                                                                                                        :START MICROCODE AT 0
     176
177
          000470
                                                              CALL
                                                                         SECOS
     178
          000474
                    005046
                                                              CLR.
                                                                         -(SP)
                                                                                                        REINHIBIT BRANCH CONTROL REG
     179 000476
                                                              CALL:
                                                                         CPCR
     180 000502
                     005046
                                                              CLR -
                                                                         -(SP)
     181
          000504
                                                              CALL
                                                                         LBCP
                                                                                                        :SINGLE-CLOCK-TO-REINHIBUT-BRANCH-REGISTER
     183
          000510
                     012767
                               001000
                                                                                                       #RE-ARM INTERRUPTS

#SET SEARCH MODE + ENABLE INTERRUPTS

#CLEAR ALL SELECTIONS

#CLEAR DRIVE AND PULSE

#CLEAR OF NO-CLOCK
                                         176422
                                                              MOV.
                                                                         #Q$REBK,QR$CR2
                    012767
012746
     184 000516
                               120000
                                                              MOV
                                                                         #<Q$SM+Q$ENOP>,QR$CR2
#Q$CSEL,-(SP)
     185
          000524
                               000360
                                                              MOV-
     186
          000530
                     052716
                               001001
                                                              BIS.
                                                                         #<Q$LBD+Q$LBP>,(SP)
     187
          000534
                     052716
                                                                        #<Q$MNC+Q$CNC>,(SP)
-(SP)
          000540
     188
                     005046
                                                                                                        :SET-MOTHING
     189
          000542
                                                              CALL
                                                                         CSR1
     190
          000546
     191
                    032767
                               000000G-000000G-
                                                                         #RP,BASE
                                                              BIT
                                                                                                        :REPEAT PROMPT
          000554
                    001412
                                                                                                       :NO. ONCE ONLY
:READ DATA FROM COMMAND LINE
:EXIT ON END OF MEMORY OR ERROR
:<CR> RESPONSE TO PROMPT
                                                              BEQ.
                                                                        2$
     193
          000556
                                                    1 :
                                                              CALL
                                                                        PDATA:
     194
          000562
                     103434
                                                              BCS.
                                                                        LDMDX-
     195
          000564
                                                              BVS
                                                                        I DMDX.
     196
          000566
                                                                                                        ;LOAD MRP DATA MEMORY ;BUMP ADDRESS
                                                                        LOADMD -
     197
          000572
                     066767
                              000000G 000000G
                                                              ADD -
                                                                         INCVAL, MSTR2
     198 000600
                    000766
                                                                         1$
                                                                                                        REPEAT
     199
     200
                                                              PROMPT ONCE THEN FILL MEMORY
     201
     202-000602
203-000606
                                                                        PDATA-
                                                              CALL
                                                                                                        PROMPT
                     193422
                                                              BCS -
                                                                        LDMDX-
                                                                                                        :END OF MEMORY OR ERROR
     204
          000610
                     102421
                                                              BVS -
                                                                                                        :<CR> RESPONSE
:LOAD -DATA MEMORY
:ADVANCE ADDRESS
     205
          000612
                                                              CALL
                                                                        LOADMD -
     286
          000616
                    066767
                               000000G · 000000G
                                                                         INCVAL, MSTR2
                                                              ADD -
     207
          000624
                    026767
                               000000G - 000000G
                                                                                                       #HAS UPPER MEMORY LIMIT BEEN REACHED 
#NO. CONTINUE 
#LOOP ON
                                                                        MSTR2, MEND.
          000632
     208
                     101767
                                                              BLOS
BIT:
                                                                        3$
     209 000634
                    032767
                              000000G-000000G
                                                                        #LOOP,BASE
LDMDX
     210
         000642
                    001404
                                                                                                       ;EXIT
;REINITIALIZE ADDRESS
    211 000644
212 000652
                    016767
                              000000G-000000G
                                                              MOV
                                                                        MSTRT, MSTR2
                    000757
                                                              BR
                                                                        3$
     213
214 000654
                    005046
                                                              CLR.
MOV.
                                                   LDMDX:
                                                                                                       :CLEAR NOTHING IN CSR1
    214 000654
215 000656
216 000662
217 000666
218
                    012746
                               176000
                                                                        #Q$HCLK,-(SP)
CSR1
                                                              CALL
          000666
                    005067
                               176422
                                                                                                       :SET-LOAD-MODE-
     219
     220 000672
     221 000672
                   042767
                              000000G-000000G
                                                                                                       ;CLEAR·PROMPT·FLAG·
;KILL·AST·(IF·THERE·WAS·ONE)
                                                              BIC.
                                                                        #RP,BASE
     222.000700
223 000704
                                                              CALL
                                                                        KILL
                    000167
                              000000G
```

in in the area offer if to

0-M1110 27-MAR-80 15:10 PAGE-6 Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3 225 226 227 228 229 LOAD MRP MICROPGM MEMORY 230 000710 LOADMM: 231 000710 232 000714 233 000720 016746 000000G SEND CURRENT ADDRESS SEQUENCE UP TO START ADDR MOV: MSTR2,-(SP) CALL SEQMM-012746 000012 MOV. #<MMURTEN+MMLEFT>,-(SP) 234 000724 235 000730 CALL MRPCRA. DIRECT CNIL WORD TO MRP MOVE DATA WORD TO LOD BUS REG SEND DATA WORD TO MRP 016746 000000G MOV. DATA1,-(SP) 236 237 238 000734 CALL LBMSC NS. 000740 016746 000000G MSTR2,-(SP) MOV-:SEND CURRENT ADDRESS 239 000744 CALL SEQMM. :SEQUENCE · UP · TO · START · ADDRESS 240 000750 241 000754 242 000760 012746 000010 MOV. #<MMWRTEH>,-(SP) CALL MRPCRA-:DIRECT · CNTL · WORD · TO: 所管 016746 000000G MOV. DATA2,-(SP) :MOVE DATA WORD TO TOD BUS REG :SEND DATA WORD TO MRP 243 000764 LBMSC -CALL NS. 244 000770 GLR. CALL 245 -(SP) 000772 000776 246 247 MRPCR: ; CLEAR.THE.MRP.CR.BITS. NS 005046 CLR. -(SP)248 001000 CALL LBMRP ; ISSUE - CLOCK - TO - REINHIBIT - BR 249 001004 RETURN:

```
MRLD-.. MACRO.M1110 27-MAR-80 15:10 PAGE:7
                                        Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
    252
253
                                                          LOAD MRP DATA MEMORY
    254
255
    256
257
         001006
                                                 LOADMD:
                   012767
012767
         001006
                             000004
                                       176424
                                                                    #0st DMD, ORSI BR
                                                                                                 ; MOVE · ATTN CODE · TO · LOD · BUS · REG
         001014
                             120100
                                      176422
                                                          MOV
                                                                    #<Q$ATTN+Q$SM+Q$ENOP>,QR$CR2.;SET.ATTN.CODE.READY
     259
         001022
                   016701
                             176422
                                                 15:
                                                          MOM
                                                                    QR$CR2,R1
                                                                                                 :READ . CSR2
     260 001026
                   032701
                             000100
                                                          BIT
                                                                    #Q$ATTN,R1
                                                                                                 :ATTN-CLEAR
     261
         001032
                   001373
                                                                    1$
                                                                                                 ;NO, READ-AGAIN-
     263 001034
                   016767
                             000000G-176424
                                                          MOV
                                                                                                 :CD MEMORY START—ADDRESS:河西城市。
                                                                    MSTR2, QR$LBR
    264 001042
                                                                   #Q$CCCP,R! ;CD MEMORY SINK, HD

#Q$CCCP+Q$SM+Q$ENOP>,QR$CR2, ;SET.CC.TO.CP.

QR$CR2,R! ;READ CSR2

#Q$CCCP,R! ;IS.CC.TO.CP.CLEAR.

2$ ;NO, READ.AGAIN.
                   012767
016701
                             120040
                                      176422
                                                          MOV-
         001050
                             176422
                                                          MOV
     266
         001054
                   032701
                             000046
                                                          RIT
     267
         001060
                   001373
                                                          BHE
     268
     269
         001062
                   012767
                             000001
                                      176424
                                                          MOV
                                                                    #1,QR$LBR ;TRANSFER COUNT = 1 WORD 
#<QSCCCP+Q$SM+Q$ENOP>,QR$CR2 ;SET CC TO CP
                                                                    #1,QR$LBR
     270 001070
                   012767
                             120040
                                      176422
                                                          MOV.
     271 001076
                   016701
                             176422
                                                                    QR$CR2,R1
                                                                                                 :READ CSR2
     272-001102-
                   032701
                             000040
                                                          BIT
                                                                    #Q$CCCP,R1
                                                                                                 ; IS - CC - TO - CP - CLEAR -
     273 001106
                   001373
                                                                                                 :NO. READ-AGAIN-
     274
     275 001110
                   012767
                             000000G-176424
                                                          MOV-
                                                                    #DATA1,QR$LBR
                                                                                                 CC MEMORY DATA BUFFER
     276 001116
                   012767
                             120040 176422
                                                                    #<Q$CCCP+Q$SM+Q$ENOP>,QR$CR2:;SET.CC.TO.CP
     278
                                                          WAIT-FOR-INTERRUPT-FROM-CP-
     279
     280 001124
                                                          WTSE$S - #EFN.3
     281
    202.001136
283
                                                          CLEF$S - #EFN.3
     284
                                                          RE-ARM. INTERRUPTS
     285
    286 001150
287 001156
                   012767
                             100400
                                      176422
                                                          MOV-
                                                                    #<Q$SM+Q$CHB>,QR$CR2.;CLEAR.INTERRUPT.(USE.HIT.BUFFER.INT)
                   012767
                             101000
                                      176422
                                                          MOV.
                                                                    #<Q$SM+Q$REBK>,QR$CR2.;RE-ARM.
#<Q$SM+Q$ENBK+Q$ENDP>,QR$CR2.;ENABLE.
     288 001164
                   012767
                             160000
                                      176422
                                                          MOV-
    289 001172
290
                                                          RETURN
                   000001
                                                          .END
```

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MRLD M1110 27-MAR-80 15:10 PAGE 7-1 Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
ALUCKE = : 848888
                              BYTE39 = . 000047
                                                            BYTE90= 000132
                                                                                          LOC.WB= 100000
                                                                                                                         0sec
                                                                                                                                   000045
ALUDE = 004000
A01 = 010000
BASE = ******** GX
                              BYTE4 = 0000004
                                                            BYTE91=-000133
                                                                                          LOOP = ****** GX:
MAREN1 = *000001
                                                                                                                                = - 000044
                                                                                                                         O$FO
                              BYTE40= 000050
                                                            BYTE92 = 000134
                                                                                                                                   000046
                                                            BYTE93= 000135
                              BYTE41 = . 000051
                                                                                          MAREN2 = . 004000
                                                                                                                         Q$HBF - - 000002
BINWD: =: ****** GX:
                              BYTE42= 0000052
                                                            BYTE94= 000136
                                                                                          MARLOD = 010000
                                                                                                                        0$ICP = 000006
0$IHB = 000003
BITVAL = : 000000
                              BYTE43=: 000053
                                                            BYTE95=-000137
                                                                                          MAROUT= . 000002
BIT0 = .000001
                              BYTE44= · 000054
                                                            BYTE96= : 000140
                                                                                          MAR.LO= 002000
                                                                                                                         Q$IHRL= 000002
      = 0000002
BITI
                              BYTE45= 000055
                                                            BYTF97=-000141
                                                                                                                         0$IMRP= 000007
                                                                                          MAR.OU= 000040
BIT10 = .002000
                              BYTE46= 0000056
                                                            BYTE98= 000142
                                                                                          MBKALL=-001000
MBKCLK=-000400
                                                                                                                         Q$LBD - = - 001000
BIT11 = 004000
                              BYTE47 = . 000057
                                                            BYTE99= 000143
                                                                                                                        0$LBDP=-001001
0$LBP = 000001
BIT12 - - 010000
                              BYTE48= : 000060
                                                            BYTVAL = 000144
                                                                                          MDHIGH= ******** GX
BIT13 = 020000
                              BYTE49= 000061
                                                            CBKALL = . 001000
                                                                                          MDLOU--- жжжжжж GX-
                                                                                                                         Q$LDCD= 000003
                              BYTE5 = 000005
BIT14 = 040000
                                                            CBKCLK= 000400
                                                                                          MEND. = ****** GX
                                                                                                                        Q$LDMD= 000004
BIT15 = 100000
                              BYTE50= 0000062
                                                            CHOBRE = 100000
                                                                                          MMADRD=-000100
                                                                                                                        Q$LDPP=:002000
BIT2 - - 000004
                              BYTE51= 000063
BYTE52= 000064
                                                                                                                        0$LHP_= 010000
0$MNG = 140000
0$MR = 000052
0$MR = 000040
                                                            CPCCEN= 010000
                                                                                          MMHIGH= · жижжжжж GX ·
        = 000010
                                                            CPCP.
                                                                   = · ********** GX
                                                                                          MMLEFT= 000002
        = 0000020
                              BYTE53= 000065
BIT4
                                                            CPREAD = 040000
                                                                                          MMLOW-=-****** GX
MMOE-=-000004
        = 0000040
BIT5
                              BYTE54= 0000066
                                                            CPWRTE = - 020000
        = 000100
BIT6
                              BYTE55= 0000067
                                                            CSADRD= 000004
                                                                                          MMWRTE= 000010
                                                                                                                        Q$MRP2= 000240
Q$MSC = 040000
Q$MSET= 000004
        - 000200
                              BYTE56= MANAZA
                                                            CSEQCI = 100000
                                                                                          MHOBRE = 100000
BIT8
        = 000400
                              BYTE57= 000071
                                                            CSOE - 000040
CSR1 = ********** GX
                                                                                          MREH1 = 0000001
BIT9
        = 001000
                              BYTE58=-000072
                                                                                          MREN2 - - 020000
                                                                                                                        Q$MSP - = 100000
BUFSET= ****** GX*
                              BYTE59= 000073
                                                            CSWRTE = . 000100
                                                                                                                        Q$NCLK= 176000
Q$PP = 000100
                                                                                          MRPCR -= - ****** GX
BUFS2 - - ******* GX-
                              ВҮТЕб = ООООО
                                                            DATA1 = · ****** GX · DATA2 · = · ****** GX ·
                                                                                          MRPCRA= · ******* GX
BYTE0 = 000000
BYTE1 = 000001
                              BYTE60= 000074
                                                                                          MRPXX- = - ******** GX
                                                                                                                        Q$PPSW= 000320
                              BYTE61= 000075
BYTE62= 000076
                                                            DBR.RD= 000001
                                                                                          MSTRT = ****** GX
                                                                                                                        Q$PP2.=.000300
BYTE10= 000012
                                                            DB$CPP=-001457
                                                                                          MSTR2 - = · ******** GX ·
                                                                                                                        Q$QHLT=.000013
BYTE11 = . 000013
                              BYTE63= 000077
                                                            DB$SPT= 000026
                                                                                          MSYN - 000040
                                                                                                                        Q$QL
                                                                                                                                = - 000043
BYTE12= 000014
                              BYTE64= 000100
                                                                                                                        Q$QLA = 000043
                                                            DB$TPC= 000023
                                                                                                  = .000144
BYTE13= 000015
                                                            DISPGS= 100000
                              BYTE65= 000101
                                                                                          PACK -
                                                                                                                        Q$QLB - = 000054
Q$QLR - = 000001

    = · *********** GX

BYTE14= 000016
                              BYTE66= 000102
                                                            DMAAWR = . 000005
                                                                                          PDATA = жижжиж GX
BYTE15= 000017
                              BYTE67 = . 000103
                                                            DMARRD = · 000003
                                                                                                                              `=-000042
                                                                                          PLB - - 000010
                                                                                                                        Q$QW
BYTE16= 000020
BYTE17= 000021
                              BYTE68= 000104
                                                            DMARWR = - 0000004
                                                                                          PLC:
                                                                                                  -- 000020
                                                                                                                         0$RDCD= 000005
                              BYTE69 = . 000105
BYTE7 = . 000007
                                                                                                  = . 000020
                                                            EFN:3 = ******* GX-
                                                                                                                        Q$RDMD= 000006;
                                                                                          PLD.
BYTE18= 0000022
                                                                                                                        Q$REBK= 001000
Q$RNC = 006000
Q$RSC = 004000
                                                            ENBR: = 010000
                                                                                          PLRWR - = - 000200
BYTE19 - 000023
BYTE2 - - 000002
                              BYTE70= 000106
                                                            ERR11 = ****** GX
                                                                                          PLR.EN= 000200
QR$CR1= 176420
                              BYTE71= 000107
                                                            ERR4
                                                                   = · ****** GX ·
BYTE20= 0000024
                              BYTE72= 000110
                                                            ERR5
                                                                    = · ******* GX
                                                                                          QR$CR2= 176422
                                                                                                                        Q$RSET= 000010
BYTE21= 0000025
                              BYTE73= 000111
                                                                                                                        Q$SM = 100000
Q$SP = 000120
                                                            FRR7
                                                                    = · ********** GX
                                                                                          QR$LBR= · 176424
BYTE22= 000026
                              BYTE74= 000112
                                                                    = - жноконож GX
                                                            FIND.
                                                                                          Q$ATTN= .000100
BYTE23= 0000027
                              BYTE75= .000113
                                                                   = - Hototototok GX
                                                            HANG:
                                                                                                                         Q$SP2·=·000340
                                                                                          Q$BCL - = - 000001
BYTE24= 000030
                              BYTE76=-000114
                                                                                          Q$CCCP= 000040
                                                            INCVAL= · жжножжж GX
                                                                                                                        RGQ.EN= 000200
BYTE25= .000031
                              BYTE77=-000115
BYTE78=-000116
BYTE79=-000117
                                                            KILL: =: жжжжжж GX
                                                                                          Q$CHB - = - 000400
                                                                                                                        RGQ.VA= 020000
RP = ********
BYTE26= 000032
                                                                    = · ******* GX
                                                            LBCP
                                                                                          Q$CHRL=-000200
                                                                                                                                BYTE27= 000033
BYTE28= 000034
                                                            LBMRP - = - ******* GX
                                                                                          Q$CLR·=·000040
Q$CNC·=·030000
Q$CP·=·000060
                                                                                                                        RTNPT = ********** GX:
                              BYTE8 = 000010
                                                            LBMSC
                                                                   = · ***** GX
                                                                                                                        SCAN = ******* GX
BYTE29= 0000035
                              BYTERA= . 000120
                                                            LDMDX-
                                                                      000654R
                                                                                     002 · Q$CP ·
                                                                                                                        SEQCS = ******* GX
BYTE3 = 000003
                              BYTE81= 000121
                                                                                     002 · Q$CPCC= · 000010
                                                            LD1
                                                                      000010RG
                                                                                                                        SEQMM·=·****** GX
BYTE30=-000036
                              BYTE82= 000122
                                                            LD1LN - - 000002 - G
                                                                                     Q$CP2.=.000260
002.Q$CSC.=.010000
                                                                                                                         SEQ.CI= 000010
BYTE31= 000037
                              BYTE83 = . 000123
                                                            L D 1MD
                                                                      000424RG
                                                                                                                        S$CIR = 000000
$$IA = 000001-
$$GB = 000005
BYTE32= 0000040
                              BYTE84= 999124
                                                            LD1MM
                                                                      000262RG
                                                                                     002
                                                                                          ·Q$CSEL=-000360
BYTE33= 000041
                              BYTE85 - 000125
                                                                      000000RG
                                                            LDITBL
                                                                                     002 · Q$CSET= · 000002
BYTE34= 0000042
                              BYTE86= 000126
                                                                      000672R
                                                            LD1X
                                                                                     002.05CSP.=.020000
                                                                                                                         S$OR
                                                                                                                                ~≞ 000006
BYTE35 = . 000043
                              BYTE87 = . 000127
                                                            LOADMD -
                                                                      001006R
                                                                                     002 · Q$DMA · = · 000001
                                                                                                                         S#0X
                                                                                                                                - йййййй4
BYTE36= 000044
                              BYTE88 = . 000130
                                                            LOADMM-
                                                                      000710R
                                                                                          · Q$ENBK = · 040000
                                                                                     002
                                                                                                                         S$SR
                                                                                                                                ≈ . 000007
BYTE37= 000045
                              BYTE89= 000131
                                                            LCI.EN= 000100
                                                                                          Q$ENOP = . 020000
                                                                                                                                   000010
                              BYTE9 = 0.00011
Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3.5 $52
BYTE38 = . 000046
                                                                                                                                   000014
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MRLD--- MACRO-Mill0 27-MAR-80 15:10 PAGE-7-2-
SYMBOL-TABLE- Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
TD$GTR=-176370
                                     T$ICD - - 000040
                                                                         WORD18= 000044
                                                                                                              WORD46= 000134
                                                                                                                                                   WORD74=.000224
TD$CTW=-176360
TD$INL=-004000
                                     T$MODE = . 004000
                                                                         WORD19=-000046
WORD2-=-000004
                                                                                                              WORD47= 000136
                                                                                                                                                   WORD75=-000226
                                     T$0B. =.000036
                                                                                                              WORD48 = . 000140
                                                                                                                                                  WORD76= 000230
WORD77= 000232-
TD$MEM= . 000270
                                     T$0BE · = · 004000
T$0BF · = · 010000
                                                                          WORD20 = . 000050
                                                                                                              WORD49= 000142
WORD5 = 000012
TD$0AR= 176344
                                                                         WORD21=-000052
                                                                                                                                                   WORD78= 000234
TD$OTR= 176346
TD$QRD= 000274
TD$SW = 176376
                                     T$0BRA= 0000034
                                                                         WCRD22= 000054
                                                                                                              WORD50= 000144
                                                                                                                                                   WORD79= 000236
                                     T$0BWA= 0000032
                                                                         WORD23= nnnn56
                                                                                                              WORD51= 000146
                                     T$0UTA = 100000
T$RBD0 = 000200
T$RNB = 000040
                                                                                                                                                   WORD8 = 000020
                                                                         WORD24= 000060
                                                                                                                                                  WORD80 = 000240
WORD81 = 000242
                                                                                                              WORD52= 000150
TD$TAR= 176372
                                                                         WORD25 - 000062
                                                                                                              WORD53= 000152
TD$TAW= 176362
                                                                         WCRD26=-000064
WORD27=-000066
WORD28=-000070
                                                                                                              WORD54= 000154
                                                                                                                                                   WORD82= 000244
TD$TDR= 176374
                                     T$RSET= 040000
                                                                                                              WORD55= 000156
                                                                                                                                                  WORD83= 000246
WORD84= 000250
TD$TDW= · 176364
                                     T$SC+ = 000022
T$SCLK= 020000
                                             - 000022
                                                                                                             WORD56= 000160
WORD57= 000162
                                                                         WCRD29= 000072
                                                                                                                                                  WORD85= 000252
T$BA - - 000002
T$BD - - 000010
                                     T$SEG1 = . 000000
                                                                         WCRD3 = 000006
WORD30= 000074
                                                                                                              WORD58=-000164
                                                                                                                                                  WORD86= 000254
WORD87= 000256
WORD88= 000260
                                     T$SEG2=-000001
                                                                                                              WORD59= 000166
T$BSO - = · 100000
                                     T$SEG3=-000002
T$SO---000001
T$UBUS=-100000
                                                                         WORD31 = .000076
                                                                                                             WORD6 = 000014
WORD60= 000170
T$BT = 000020
T$BTAR = 000030
                                                                         WORD32= 000100
WORD33= 000102
                                                                                                                                                  WORD89= 000262
T$BTAR = 000030
T$CD = 002000
T$CLK = 002000
T$DISK = 000200
T$DRD = 000004
T$EMEM = 010000
T$FAA = 000000
                                                                                                              WORD61=.000172
                                                                                                                                                  WORD9 ≈ 000022 .
WORD90≈ 000264.
                                     T$1CLK=-000400
T$8BEN=-000020
                                                                         WORD34= 000104
                                                                                                             WORD62= 000174
WORD63= 000176
                                                                         WORD35 - 000106
                                                                                                                                                  WORD91= 000266
                                     UBD. IN= 000020
                                                                         WORD36=-000110
WORD37=-000112-
                                                                                                              WORD64= 000200
                                                                                                                                                  WORD92=-000270
WORD93=-000272
                                    WORD0 = 000000
WORD1 = 000002
                                                                                                             WORD65= 000202
                                                                         WORD38 = . 000114
                                                                                                             WORD66= 000204
WORD67= 000206
                                                                                                                                                  WORD94= 000274
                                     WORD10= 000024
                                                                         WORD39=-000116
WORD4 =-000010
                                                                                                                                                  WORD95= 000276
WORD96= 000300
                                    WORD!1= 000026
WORD!2= 000030
                                                                                                             WORD68= 000210
T$FSAB=-000004
T$FSAC=-000014
                                                                         WGRD40=.000120
WORD41=.000122
                                                                                                             WORD69=-000212
WORD7 =-000016
                                                                                                                                                  WORD97= 000302
                                     WORD13= 000032
                                                                                                                                                  WORD98= 000304
T$F$B2= 000010
                                    WORD14= 000034
WORD15= 000036
                                                                         WORD42 - 000124
                                                                                                             WORD70=-000014
WORD71=-000216
WORD72=-000220
                                                                                                                                                  WORD99= 000306
                                                                         WORD43= 000126
T$IBAR=-000024
T$IBE-=-020000
                                                                                                                                                  WRDVAL = . 000310
XTREAD = . 001000
                                     WORD16= 000040
                                                                         WORD44= 000130
                                    WORD17=-000042
                                                                         WCRD45= 000132
                                                                                                             WORD73= 000222
                                                                                                                                                  XTWRTE = 000400
T$IBF - = - 040000
 ABS:
            000000
                             000
            000000
                             001
            001174
                             002
ERRORS DETECTED:
                           0
VIRTUAL MEMORY USED: 3608 WORDS ( 15 PAGES)
DYNAMIC MEMORY: 4916 WORDS ( 18 PAGES)
ELAPSED TIME: 00:00:48
MRLD, MRLD/-SP=[20.1]IM,[20.1]MRLD
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MACRO-MIII0
                       27-MAR-80 15:11 PAGE 5
                                         Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
                                                                .TITLE. MRPR
.PSECT MRPR
    000000
 23456789
                                                               \begin{array}{ll} \mathsf{HARDWARE} \cdot \mathsf{QUERY} \cdot \mathsf{RESOLVER} \cdot \mathsf{"MANUAL"} & \mathsf{DEBUGGING} \quad \mathsf{AIDS} \\ \mathsf{MATCH} \cdot \mathsf{REPORT} \cdot \mathsf{PROCESSOR} \cdot \mathsf{ROUTINES} \cdot \end{array}
                                                               COMMANDS:
                                                                           PRINT CONTENTS OF MRP MEMORY
10
                                                               ONCE-A-COMMAND-HAS-BEEN-EXECUTED (OR-AN-ERROR-ENCOUNTERED)
THIS-MODULE-RETURNS-CONTROL-TO-THE-MODULE-MRP-AT-LOCATION-
*MRPXX*.
11
12
13
14
15
16
17
                                                      18
19
                                                               THE COMMAND TO PRINT MRP DATA MEMORY CANNOT BE USED
20
21
22
23
24
25
26
27
                                                               UNLESS MRP MICROPROGRAM MEMORY AND CP CONTROL STORE HAVE BEEN LOADED VIA THE "LOADER" PROGRAM.
                                                      .MCALL CLEF$S, WTSE$S, RDAF$S
28
29
30
                                                               TABLE OF VALID MRP MEMORY MNEMONICS AND ADDRESSES OF
                                                               ASSOCIATED ROUTINES
31
32
    000000
                                                    PR1TBL::
33
    000000
                                115
                                                                .ASCII-
                                                                           ZMMZ
                                                                                                              :PRINT-MICROPGM-MEMORY
34
    000002
                0002761
                                                               .WORD
                                                                           PR1MM
35
    999994
                115
000476
                                104
                                                                .ASCII
                                                                                                              ;PRINT-DATA-MEMORY
36
37
    000006
                                                                .WORD
                                                                           PRIMD
                                                    PRILN-
                                                                           <.-PR1TBL>/4
38
40
                                                               PRINT.
                                                               PERFORM THIRD LEVEL PARSING EG. IN THE COMMAND:
41
42
43
                                                               MR>PR:MD:0
PARSE:THE:"MD:
44
45
46
47
    000010
000010
                                                    PR1::
                                                               CALL
BCC+
                                                                                                              ;LOCATE MEMORY MNEMONIC IN COMMAND LINE :OK, CONTINUE : :MISSING OPERAND:
                                                                           FIND
49
    000014
                103004
                                                                           1$
50
    000016
                                                               CALL
                                                                           ERR4
    000022
                000167
                           001042
                                                               TMP
                                                                           PR1X
52.
53 000026
54 000032.
                012700
012702
                            000002
                                                    1$:
                                                               MOV-
                                                                           #PR1LH,R0
                                                                                                              : NUMBER OF TABLE ENTRIES
                           000000
                                                               MOV.
                                                                           #PR1TBL,R2
                                                                                                              POINT TO THE MATCH AGAINST COMMAND LINE MATCH WAS MADE
55
    000036
                                                               CALL
                                                                          SCAN
2$
56
    000042
                103004
                                                               BCC.
                                         Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3 MNEMONIC
    000044
```

MRPR-

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MRPR-
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                 0 · M1 1 10
                                              Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
       58 000050
                      000167
                                001014
       59
                                                                   SAVE-POINTER TO-ROUTINE-ASSOCIATED-WITH-THE-MEMORY-MNEMONIC: SCAN-THE-REMAINDER-OF-THE-COMMAND-LINE-FOR CONTROL-INFORMATION:
       68
       61
       62
       63
                                                                        START ADDRESS ONLY. PRINT ONE MEMORY LOCATION.
       64
                                                                        MR>PR-MD-A
                                                                        START ADDRESS, LOOP INDICATOR, LOOP ON THE READING OF
                                                                        THIS ONE MEMORY LOCATION ONLY. PRINT THE CONTENTS ONLY
       66
67
                                                                        ONCE
                                                                       MR%LD.MD.Ø L.
START.ADDRESS, END.ADDRESS, NO.LOOP. PRINT.THE.CONTENTS.
OF.MEMORY BETWEEN.THE.START.AND.END.ADDRESSES.
       70
                                                                        MR>PR·MD·0
                                                                       START-ADDRESS, END-ADDRESS, LOOP-INDICATOR, READ-THE-CONTENTS-OF-MEMORY BETWEEN-THE-START-AND-END-ADDRESSES, HOWEVER, PRINT-ONLY-THE-CONTENTS-OF-MEMORY-AT-THE-START-ADDRESS.
                                                                        MR>PR.MD.0 7 L
                                                                                                                :SAVE-POINTER:
:LOCATE-NON-BLANK-IN COMMAND-LINE
       78
           000054 010167
                                 000000G
                                                                   MOV-
                                                                               R1.RTNPT
           000060
                                                                   CALL
                                                                              FIND
           000064
                                                                   BCC:
                                                                               3$
                                                                                                                ;OK, CONTINUE
       81
           000066
                                                                   CALL
                                                                              ERR4
                                                                                                                : 'MISSING OPERAND'
       82
           000072.
                      000167
                                                                    JMP.
                                                                               PR1X
                                                                                                                : FXIT-
       83
           000076
                                                                                                                CONVERT COMMAND LINE VALUE TO BINARY
                                                                   CALL
                                                                              PACK
           000102
                                                                   BCC
                                                                               4$
                                                                                                                CONVERSION SUCCESSFUL
       85
           000104
                                                                   CALL
                                                                               ERR5
                                                                                                                ; "INVALID NUMERIC VALUE"
       86
           000110
                      000167
                                 000754
                      016767
016767
       88
           000114
                                 000000G 000000G 4$:
                                                                   MOV-
                                                                              BINWD, MSTRT
                                                                                                                :SAVE-PRINT-START-ADDRESS
:SAVE-IT-TWICE-
:INIT-END-ADDRESS-
       89
           000122
                                 000000G 000000G
                                                                              BINWD.MSTR2
           000130
                      012767
                                             имимия
                                                                              #-1.MEND
       91
                                                                   START ADDRESS HAS BEEN FOUND, SCAN-FOR END ADDRESS OR LOOP INDICATOR (CONDITIONS 2, 3 ABOVE), IF THERE IS NOTHING FURTHER IN THE COMMAND LINE, CONDITION 1 IS IN EFFECT.
       92
       93
       95
           000136
                                                                              FIND
                                                                                                                SCAN-COMMAND-LINE:
SOMETHING THERE:
SET-END-ADDR-=-START-ADDR
       96
       97
           000142
                      103004
                                                                   BCC:
                                                                               5$
           000144
                      016767
                                 000000G-000000G
                                                                   MOV.
                                                                              MSTRT, MEND
       99
           000152
                      000445
                                                                                                                :JUMP - TO - RTN -
      100
      101
           000154
                       122711
                                 000114
                                                                   CMPR
                                                                              #1L,(R1)
                                                                                                                ;LOOP · INDICATOR
           000160
                      001011
                                                                                                                ;NO, MUST BE UPPER ADDRESS
;SET-FLAG FOR OUTPUT CONTROL
;SET-END ADDR = START ADDR
      102
                                                                   BNE .
                                                                              6$
      193
           000162
                      052767
                                 000000G-000000G
                                                                               #OUT, BASE
                                                                   BIS
                                                                              MSTRT, MEND
      104 000170
                      016767
                                 000000G · 000000G
                                                                   MOV-
           000176
      105
                                                                                                                :HOW TO STOP LOOP
                                                                   CALL
                                                                              HANG
      106
           000202
                      000431
                                                                   BR
                                                                              9$
      197
                                                                                                                :CONVERT-UPPER-ADDRESS
      108 000204
                                                        6$:
                                                                   CALL
                                                                              PACK
      109 000210
                      103004
                                                                   BCC.
CALL
                                                                              7事
                                                                                                                OK, CONTINUE
     110 000212
                                                                                                                : INVALID NUMERIC ***
                                                                              ERR5
          000216
                      000167
                                 000646
                                                                              PR4X
                                                                                                                :EXIT-
     112
                                              SAVE - END - ADDRESS - (BINARY)
CHECK - FOR - LOOP - INDICATOR - AFTER - END - ADDRESS - (COND 14 FON - 4) &
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     113
     114
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MRPR-
     116
         000222
                   016767
                             000000G-000000G-7$:
                                                                     BIHWD, MEHD
                                                                                                   #SET-UP-END-ADDRESS
#CHECK-FOR LOOP-INDICATOR ***
*NO-LOOP-
    117
         000230
                                                           CALL
                                                                     FIND
    118
         999234
                    103414
                                                           BCS.
                                                                     9$
         000236
                    122711
                             000114
                                                           CMPB
                                                                     #*L,(R1)
                                                                                                   :CORRECT-LOOP-INDICATOR-
     120
         000242
                                                           BEQ
                                                                     8$
                                                                                                   :YES-
     124
         000244
                                                           CALL.
                                                                     ERR11
     122
         000250
                   000167
052767
                             000614
                                                           JMP.
                                                                     PR1X
     123
         000254
                             000000G.000000G.8$:
                                                           BIS.
                                                                     #OUT,BASE
                                                                                                   ;SET-OUTPUT-CONTROL
     124
         000262
                                                                                                   :HOW-TO-STOP-LOOP
    125
         000266
     126
                             000000G
                                                                     RTHPT.R1
                   016701
                                                           MOV-
                                                                                                   :POINT TO ROUTINE :
;JUMP - TO - ROUTINE -
         000272 000171
                             000000
                                                                     @(R1)
    129
     130
                                                           PRINT FROM MICROPGM MEMORY
    131
    132.000276
                                                 PR1MM:;
    133
         000276
                             000000G
                                                                                                   ;SUPPLY-UPPER-MEMORY LIMIT. ...
                                                           MOV
                                                                     MMHIGH,-(SP)
    134
         000302
                   016746
                             000000G
                                                           MOV-
                                                                     MMLOW_* - (SP)
                                                                                                   :LOWER LIMIT
                                                                                                   ;PREPARE FOR LOAD : NO ERROR
         000306
                                                                     BUFS2
                                                           CALL
         000312
                   103002
    137
         000314
                   000167
                             000550
                                                           JMP.
                                                                     PR1X
                                                                                                   :ERROR -
    138
         000320
                   016746
                             000000G
                                                           MOV
                                                                     MSTR2,-(SP)
                                                                                                   :SEND CURRENT ADDRESS
:SEQUENCE UP TO PRINT START ADDRESS
    140
         000324
                                                           CALL
    141
         000330
                   012746
                             000006
                                                           MGV-
                                                                     #<MMOE+MMLEFT>,-(SP)
    142
         000334
                                                           CALL
                                                                     MRPCR
                                                                                                   :DIRECT-CNTL-WORD-TO MRP:
    i 43
         000340
                   005046
                                                           CLR
    144 000342
                                                                                                   ; ISSUE · CLOCK · TO · REINHIBIT · BR · SELECT · ; REQUEST · MRP · TO · LOD · BUS · NS ·
                                                           CALL
                                                                     LBMRP
    145
        000346
                                                           CALL
                                                                     MRPLB.
         000352
    146
                  012667
                             000000G
                                                                     (SP)+,DATA1
                                                                                                   ;GET-MRP-WORD-FROM-STACK-
    147
    148
         000356
                   016746
                             000000G
                                                                                                  :SEND-CURRENT-ADDRESS
:SEQUENCE-UP-TO-PRINT-START-ADDRESS
:SELECT-RIGHT-HALF-OF-PLR-
:DIRECT-CNTL-WORD-TO-MRP----
                                                                     MSTR2,-(SP)
                                                           MOV.
    149
         000362
                                                           CALL
                                                                     SEQMM
         000366
    150
                  012746
                             000004
                                                           MOV.
                                                                     #<MMOE>,-(SP)
         000372
                                                           CALL
    152
        000376
                   005046
                                                           OLR:
                                                                     -(SP)
    153
        888488
                                                           CALL
                                                                                                   :CLOCK-TO-REINHIBIT-BRANCH-REGISTER
                                                                     LBMRP
    154
        000404
                                                           CALL
                                                                    MRPLB
                                                                                                  #PEQUEST: MRP: TO: LOD: BUS:
#GET: MRP: WORD: FROM: STACK:
#CLEAR: MRP: CONTROL: REG:
    155
         000410
                  012667
                            000000G
                                                           MOV.
                                                                     (SP)+,DATA2
    156
         000414
                                                           CLR:
                                                                     -(SP)
    157
        000416
                                                           CALL
                                                                    MRPCR
    158
    159
         000422
                                                                                                  :PRINT-MEMORY-CONTENTS:
:NOT-END-OF-MEMORY-
                                                           CALL
                                                                    PRDATA
    160
        000426
                   103002
                                                           BCC.
                                                                     2$
    161
        000430
                   800167
                            000434
                                                           JMP
                                                                    PR1X
                                                                                                   ; END · OF · MEMORY
    162
                            000000G 000000G 2$:
    163
        000434
                  066767
                                                                                                  #ADVANCE-ADDRESS:
#HAS-UPPER_MEMORY-LIMIT-BEEN-REACHED-
                                                           ADD:
                                                                     INCVAL, MSTR2
    164
        000442
                  026767
                                                           CMP
                                                                    MSTR2,MEND
    165
        000450
                   101723
                                                           BLOS
                                                                     1$
                                                                                                   ;NO,
                                                                                                       CONTINUE.
    166
        000452
                  032767
                            000000G-000000G-
                                                                     #LOOP, BASE
                                                                                                   :LOOP.ON.?
                  001002
    167
        000460
                                                           BNE
                                                                                                   ;YES, CONTINUE
    168 000462
                  000167
                                                                                                  FXIT.
                                                           JMP
                                                                    PR1X
    169
                  016767
000711
        000466
                            000000G.000000G.3$:
                                                                    MSTRT, MSTR2.
                                                          MOV
                                                                                                                                 """""
    170 000474
                                                                                                  :AND REPEATUPRINT
   171
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is the control of the fact which the form owners he will also

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0·Mil10 27-MAR-80 15:11 PAGE: 5-3
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MRPR-
    173
174
                                                       PRINT FROM DATA MEMORY
        000476
                                              PRIMD::
    176 000476
                  016746
                           000000G
                                                       MOV
                                                                                            ;SUPPLY MEMORY UPPER LIMIT
                                                                MDHIGH,-(SP)
                           000000G
    177
        000502
                  016746
                                                                MDLOW, -(SP)
                                                       MOV-
                                                                                            :LOWER-LIMIT-
    178 000506
                                                       CALL
                                                                BUFSET.
                                                                                            :PREPARE · FOR · LOAD ·
        000512
                  103566
                                                       BCS
                                                                PR1X
                                                                                            :ERROR-
    180
    181 000514
182 000520
        000514
                  012746
                                                       MOV
                                                                #377,-(SP)
                                                                                            ;SET-MRP-MICRO-ADDRESS-=-X*FF* (JUMP-SELF)
                                                                SEQMM.
    184 000524
                  005046
                                                       CLR -
                                                                -(SP)
                                                                                            :REINHIBIT BRANCH CONTROL REG
        000526
    185
                                                       CALL
                                                                MRPCR
    186
        000532
                                                                                                              araka ir
                  005046
                                                       CLR
                                                                 -(SP)
         000534
                                                       CALL
                                                                LBMRP
                                                                                            :SINGLE CLOCK TO REINHIBIT BRANCH REGISTER
    188
        000540
    189
                  005046
                                                       GLR -
                                                                 -(SP)
                                                                                            :START-MICROCODE-AT-0
    190
        000542
                                                       CALL
                                                                SEQUS
    192 - 000546
                                                       CLR
                                                                -(SP)
                                                                                           ; REINHIBIT BRANCH CONTROL REG
    193
        000550
                                                       CALL
                                                                CPCR
        000554
                  005046
                                                       CLR
                                                                -(SP)
     195 000556
                                                                LBCP
                                                       CALL
                                                                                           :SINGLE CLOCK TO REINHIBIT BRANCH REGISTER
    196
        000562
    197
                  012767
012767
                           001000
                                    176422
                                                       MOV.
                                                                                           #RE-ARM INTERRUPTS #SET SEARCH MODE + ENABLE INTERRUPTS #CLEAR ALL SELECTIONS
                                                                #OsREBK.ORSCR2
        000570
                           120000
                                    176422
                                                       MOV.
                                                                #<Q$SM+Q$ENOP>,QR$CR2.
    199
        000576
                                                                #Q$CSEL,-(SP)
#<Q$LBD+Q$LBP>,(SP)
                           000360
                                                       MOV.
                 052716
052716
    200 000602
                           001001
                                                       BIS.
                                                                                           CLEAR DRIVE AND PULSE CLEAR CP NO-CLOCK
    201
        000606
                           170000
                                                       BIS
                                                                #<Q$MNC+Q$CNC>.(SP)
                  005046
    202-000612-
                                                                -(SP)
                                                       CLR
                                                                                            ; SET - NOTH ING -
    203 000614
                                                       CALL
                                                                CSR4
    204
    205
        000620
                                                                #Q$RDMD.OR$LBR ;MOVE.ATTN_CODE.TO.LOD.BUS.REG
#<Q$ATTN+Q$SM+Q$ENOP>,QR$CR2.:SET.ATTN.CODE.READY...
                  012767
                           ининия.
                                    176424
                                             PRMD:
                                                       MOV-
    206
        000626
                  012767
                           120100
                                    176422
                                                       MOV-
    207
        000634
                  016701
                           176422
                                              1事:
                                                       MOV-
                                                                QR$CR2,R1
                                                                                           :READ CSR2
    208 000640
                  032701
                           000100
                                                       RIT
                                                                #Q$ATTH,R1
                                                                                           #ATTN-CLEAR
    209
        000644
                  001373
                                                                                           :NO. READ-AGAIN-
    210
    211 000646
                  016767
                           000000G-176424
                                                       MOV
                                                                MSTR2.QR$LBR· ;CD·MEMORY START·AD
#<Q$CCCP+Q$SM+Q$ENOP>,QR$CR2·;SET·CC·TO·CP·
QR$CR2.R1 ;READ CSR2
                                                                                            ;CD.MEMORY START.ADDRESS.
    212-000654
                 012767
                           120040
                                                       MOV:
    213 000662
                 016701
                           176422
                                             2$:
                                                       MOV-
                                                                                           ;READ CSR2
;IS-CC-TO-CP-CLEAR-
    214 000666
                 032701
                           000040
                                                       BIT.
                                                                #Q$CCCP.R1
    215 000672
                 001373
                                                                                           :NO. READ AGAIN
    216
217 000674
                 012767
                           000001
                                    176424
                                                       MGV.
                                                                #1.QR$LBR
                                                                                           :TRANSFER · COUNT · = · 1 WORD ·
        000702
                                                               218
                 012767
                           120040
                                    176422
                                                       MOV.
    219 000710
                 016701
                           176422
                                             3$:
                                                      MOV.
    220 000714
                 032701
                           000040
                                                      BIT.
    221 000720
222
                 001373
                                                                                           CC MEMORY DATA BUFFER
    223 000722.
                 012767
                           000000G · 176424
                                                      MOV.
                                                                #DATA1.QR$LBR
    224 000730 012767
                           120040
                                                      MOV.
                                                                #<Q$CCCP+Q$SM+Q$ENOP>,QR$CR2:;SET.CC.TO.CP
    225
   226
                                                      WAIT-FOR-INTERRUPT-FROM-CP
   228 000736
                                                      WT3E$S.
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229
230 000750
231
232
233
234 000762
235 000770
                                                          CLEF$S: #EFN.3
                                                          RE-ARM. INTERRUPTS
                          100400
                                                          MOV:
                                                                    #<Q$SM+Q$CHB>,QR$CR2
                                                                                                   :CLEAR · INTERRUPT · (USE · HIT · BUFFER · INT)
               012767
235 000770
236 000776
237
                012767
                          101000
                                     176422
                                                          MOV-
                                                                    #<Q$SM+O$REBK>.QR$CR2
                                                                                                   :RE-ARM
                                                                    #<Q$SM+Q$ENBK+Q$ENOP>,QR$CR2::ENABLE:
               012767
                          160000
                                    176422
                                                          MOV
238 001004
239 001010
240
                                                                                                   ;PRINT-MEMORY-CONTENTS
;END-OF-MEMORY, EXIT
                                                          CALL
                                                                    PRDATA:
                103417
                                                          BCS.
                                                                    PRMDX-
                          000000G · 000000G ·
                                                                                                   ;ADVANCE:ADDRESS:
;HAS:UPPER MEMORY:LIMIT:BEEN:REACHED
;NO; CONTINUE:
241 001012
                866767
                                                          ADD
                                                                    INCVAL, MSTR2
242.001020
                026767
                                                                    MSTR2, MEND
                                                          CMP
243
     001026
                101674
                                                          BLOS
                                                                    PRMD
                                                                                                   :LOOP ON ?
244 001030
                032767
                          000000G · 000000G
                                                          BIT.
                                                                    #LOOP,BASE
                                                                                                   ;NO, EXIT:
;INIT:START-ADDRESS
245
     001036
                001404
                                                          BEQ
                                                                    PRMDX:
                016767
246
     001040
                          000000G · 000000G
                                                                    MSTRT, MSTR2
                                                          MOV:
247
     001046
                                                                                                   ; AND · REPEAT · PRINT
248
                                                                                                   :CLEAR · NOTHING · IN · CSR1
:SET · NO~CLOCKS ·
     001050
                005046
                                               PRMDX:
                                                          CLR
                                                                    -(SP)
249
250 001052
                012746
                           176000
                                                          MOV.
                                                                    #Q$NCLK,-(SP)
251
     001056
                                                          CALL
                                                                    CSR1
252-001062-
                012767
                          000000
                                     176422
                                                          MOV:
                                                                    #0,QR$CR2
                                                                                                   ;SET-LOAD-MODE-
254
255
255 001070
256 001070
                042767
                          000000C · 000000G
                                                          BIC:
                                                                    #<ONCE+OUT>,BASE
                                                                                                   :CLEAR PRINT CONTROL FLAGS:
:KILL AST (IF THERE WAS ONE)
257
     001076
                                                          CALL
                                                                    KILL
258
     001102
                300167
                          000000G
                                                          JMP.
                                                                    MRPXX
259
260
                000001
                                                          .END
```

MRPR M 1110 27-MAR-80 15:11 PAGE 5-5 SYMBOL TA Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3 ALUCKE = . 040000 BYTE39= 000047 BYTE4 = 000004 BYTE90= 000132 MDHIGH= · ***** GX Q\$FC = 000045 ALUOE: =:004000 A01 =:010000 BASE: =:********** GX: BYTE91 = . 000133 MDLOW = · ****** GX · MEND · = · ****** GX · D\$FD = 000044 BYTE92=-000134 BYTE40 = . 000050 ■ . 000046 0sFP MMADRD= 000100 BYTE41= 0000051 BYTE93=-000135 OSHBE: 000002 BYTE94= 000136 Q\$ICP-=-000006 Q\$IHB-=-000003 Q\$IHRL=-000002 BINUD - = · ***** GX-BYTE42= 000052 BITVAL = 000000 BYTE43 = . 000053 BYTE95 = . 000137 BIT0 = 0000001 BIT1 = 000002 BYTE44= 000054 BYTE96= 000140 MMLOW = ****** GX BYTE45= 000055 BYTE46= 000056 BYTE47= 000057 BYTE97 = · 000141 MMOE - - 000004 Q\$IMRP= 000007 MMWRTE = 000010 BIT10 = 002000 BIT11 = 004000 BYTE98=-000142 Q\$LBD-j-001000 Q\$LBDP=-001001-BYTE99= 000143 MNOBRE = 100000 BIT12 - 010000 BYTE48 = . 000060 BYTVAL = . 000144 CBKALL = . 001000 MREN1 = 0000001 MREN2 = 020000 BIT13 = 020000 BIT14 = 040000 BYTE49=-000061 Q\$LDCD= 000003 BYTE5 = 000005 CBKCLK = - 000400 MRPCR - = · ***** GX Q\$LDMD=.000004 BIT15 = 100000 BYTE50= 0000062 CNOBRE = 100000 MRPLB = ******* GX* MRPXX = ******* GX* Q\$LDPP= 002000 = 0000004 BYTE51= 000063 CPCCEN= 010000 Q\$LHP - = - 010000 BIT3 = · 000010 = · 000020 BYTE52= 000064 BYTE53= 000065 CPCR -MSTRT = ***** GX 0\$MNC -= 140000 MSTR2 = ******** GX** MSYN = **000040 BIT4 CPREAD = : 040000 Q\$MR = 000052 BITS = . 888848 BYTE54= 000066 CPWRTE = : 020000 Q\$MRP - = 000040 = · 000100 = · 000200 BYTE55= 000067 CSADRD = . 000004 = 000144 Q\$MRP2= 000240 BYTE56=.000070 BYTE57=.000071 CSEQCI=-100000 CSOE- =-000040 CSR1 =-********** GX BIT7 ONCE = - жжжжжж БХ Q\$MSC -- 040000 BITS = 000400 = · жжжжжж GX Q\$MSET=.000004 Q\$MSP.=.100000 DHT. = 001000 BYTE58= 000072 = ******** GX PACK-BUFSET= · ****** GX-BUFS2 · = · ****** GX-Q\$NCLK= 176000 Q\$PP = 000100 BYTE59= 000073 BYTE6 = 000006 CSWRTE= 000100 DATA1 = ******** GX PLB = .000010 - 000020 PLC: Q\$PPSW= 000320 Q\$PP2 = 000300 BYTE0 = 000000 BYTE60= 000074 DATA2 = ****** GX PLD. = .000030 BYTE1 = 000001 BYTE10 = 000012 BYTE61= 000075 BYTE62= 000076 BYTE63= 000077 DBR:RD= 000001 PLRWR - = - 000200 PLR.EN= 000200 PRDATA= ******* GX DB\$CPP=-001457 Q\$QHLT= 000013 Q\$QL = 000043 BYTE11=-000013 DB\$SPT=:000026 BYTE12=-000014 BYTE64= 000100 DB\$TPC=-000023 PRMD. 000620R · 0\$QLA·=· 002 000053 002 Q\$QLB = 000054 002 Q\$QLR = 000001 Q\$QW = 000042 000054_____ BYTE13= 000015 BYTE65= 000101 DISPGS= 100000 DMAAWR= 000005 PRMDX: 001050R BYTE66=-000102 BYTE67=-000103 BYTE14= 0000016 PR1 000010RG BYTE15= 000017 DMARRD = . 000003 PR1LN - - 000002 - G BYTE16=-000020 BYTE17=-000021 BYTE68= 000104 DMARWR = - 000004 002 · 0\$RDCD = · 000005 PRIMD. 000476RG BYTE69= 000105 BYTE7 = 000007 EFN:3 = ****** GX ENBR = *010000 PR1MM-000276RG 002 · Q\$RDMD = · 000006 BYTE18= 0000022 PRITBL. PRIX. 002 · Q\$REBK = · 001000 002 · Q\$RNC · = · 0060000 Q\$RSC · = · 004000 000000RG BYTE19= 0000023 BYTE70= 000106 ERRII = · ***** GX· 001070R BYTE2 - = - 000002 BYTE71= 000107 BYTE72= 000110 ERR4 = · ******* GX QR\$CR1= 176420 BYTE20=:000024 = · ******* GX · = · ******* GX · OR\$CR2= 176422 OR\$LBR= 176424 ERR5 Q\$RSET= 0000i0 BYTE21 = . 000025 BYTE73= 000111 ERR7 Q\$SM 100000 Q\$ATTN= 000100 Q\$BCL = 000001 Q\$CCCP= 000040 BYTE22=-000026 BYTE23=-000027 BYTE74= 000112 FIND = · ******* GX Q\$SP HANG = workwork GX-INCVAL = workwork GX-KILL = workwork GX-LBCP = workwork GX-BYTE75=-000113 BYTE76=-000114 BYTE77=-000115 Q\$SP2·= 000340 RGO.EN= 000200 RGQ.VA= 020000 BYTE24= 0000030 BYTE25= 000031 Q\$CHB - = 000400 Q\$CHRL=-000200 Q\$CLR.=-000040 Q\$CNC.=-030000 Q\$CP.=-000060 BYTE78= 000116 BYTE79= 000117 RTNPT = ****** GX-SCAN = ****** GX-BYTE26= 000032 BYTE27= 000033 LBMRP = ******* GX BYTE8 = 000010 LOC.EN=/000100 SEQCS - = - ******* GX: BYTE28= · 000034 BYTE29= 000035 BYTE3 = 000003 BYTE80= 000120 BYTE81= 000121 LOC:WA = 040000 LOC:WB = 100000 SEQMM: = : жикижиж GX: Q\$CPCC=-000010 Q\$CP2-=-000260 Q\$CSC-=-010000 SEQ.CI= 000010 BYTE30= 000036 BYTE82= 000122 LOOP - ******* GX S\$CLR = 000000 S\$LA = 000001 BYTE31=-000037 BYTE83=-000123 MAREN1 = . 000001 Q\$CSEL = 000360 Q\$CSET = 000002 Q\$CSP = 020000 S\$0B S\$0P S\$0X BYTE32= 000040 BYTE84= 000124 MAREN2= 004000 MARLOD= 010000 BYTE85 = . 000125 BYTE33= 000041 BYTE86= 000126 MAROUT= . 000002 BYTE34= 0000042 `000004. BYTE87=:000127 MAR.LO= 002000 MAR.OU= 000040 BYTE35 = . 000043 Q\$DMA - = - 000001 S\$SR 000007 Q\$ENBK = . 040000 Q\$ENOP = . 020000 BYTE36 = . 000044 BYTE88 = . 000130 9\$94 000010 BYTE37= 000045 = 000014 BYTE89=-000131 MBKALL = - 001000 S\$S2 TD\$CTR= 176370 BYTE38= 000046 MBKCLK= 000400 Q\$FAL - = . 004000 Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3

```
MACRO M1110 27-MAR-80 15:11 PAGE 5-6
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MRPR.
SYMBOL TABLE
TD$@TW=-176360
                                                                                                           WORD46=:000134
WORD47=:000136
                                    T$ICD - = -000040
                                                                        WORD18= 000044
                                                                                                                                               WORD74= 000224
TD$INL = . 004000
TD$MEM = . 000270
                                                                       WORD19=-000046
WORD2-=-000004
WORD20=-000050
                                                                                                                                               WORD75= 000226
WORD76= 000230
WORD77= 000232
                                    T$MODE = . 004000
                                    T$0B · = · 000036
T$0BE · = · 004000
                                                                                                           WORD48= 000140
TD$0AR= 176344
                                                                                                           WORD49= 000142
TD$OTR=.176346
TD$QRD=.000274
TD$SW-=.176376
                                                                       WORD21 = 000052
WORD22 = 000054
                                    T$0BF · = · 010000
                                                                                                           WORD5 = 000012
                                                                                                                                               WORD78= 000234
                                    T$0BRA=.000034
T$0BWA=.000032
                                                                                                            WORD50=-000144
                                                                                                                                               WORD79=.000236
                                                                       WORD23= 0000056
                                                                                                           WORD51= 000146
WORD52= 000150
                                                                                                                                               WORD8 = 000020
WORD80 = 000240
TD$TAR= 176372
                                    T$0UTA= 100000
                                                                        WORD24= 0000060
TD$TAW= 176362
                                    T$RBD0=.000200
                                                                        WORD25=-000062
                                                                                                            WORD53≈ · 000152
                                                                                                                                               WORD81= 000242
                                                                       WORD26 = 0000064
WORD27 = 000066
TD$TDR= · 176374
                                    T$RNB - = - 000040
                                                                                                           WORD54--000154
WORD55--000156
                                                                                                                                               WORD82= 000244
WORD83= 000246
                                    T$RSET=:040000
TD$TDW= 176364
T$AD - - 000020
T$BA - - 000002
                                    T$90.
                                            - 000022
                                                                        WORD28=-000070
                                                                                                            WORD56=-000160
                                                                                                                                               WORD84= 000250
                                    T$SCLK = . 020000
                                                                       WORD29 = 000072
WCRD3 = 000006
                                                                                                           WORD57=.000162
WORD58=.000164
                                                                                                                                               WORD85 = 000252
WORD86 = 000254
                                    T$SEG1=-000000
T$SEG2=-0000001
T$BD
        = .000010
T$850 - = 100000
                                                                        WORD30= 0000074
                                                                                                           WORD59= 000166
                                                                                                                                               WORD87=.000256
T$BT: =:000020
T$BTAR=:000030
                                    T$SEG3=-0000002
T$SO- =-000001
T$UBUS=-100000
                                                                        WORD31= 000076
                                                                                                            WORD6 - 000014
                                                                                                                                               WORD88= 000260
                                                                       WORD32=-000100
WORD33=-000102
                                                                                                           WORD60=-000170
                                                                                                                                               WORD89=-000262
WORD9 =-000022-
                                                                                                           WORD61=-000172
T$BTD - - 002000
T$CD· = 000100
T$CLK· = 002000
                                    T$1CLK=-000400
                                                                        WORD34= 000104
                                                                                                           WORD62= 000174
                                                                                                                                               WORD90 = · 000264
                                                                                                                                               WORD91= 000266
WORD92= 000270
WORD93= 000272
                                    T$8BEH= 0000020
                                                                        WORD35= 000106
                                                                                                            WORD63=-000176
T$DISK = 000200
T$DRD - 000004
                                   UBD: IN= 000020
WORD0 = 000000
WORD1 = 000002
                                                                       WORD36=-000110
WORD37=-000112
                                                                                                           WORD64= 000200
WORD65= 000202
                                                                                                                                               WORD93= 000274

WORD94= 000274

WORD95= 000276

WORD96= 000300

WORD97= 000300

WORD98= 000304
T$EMEM= : 010000
                                                                       WORD38= 000114
                                                                                                           WORD66= 000204
                                   WORD10=-000024
WORD11=-000026
WORD12=-000030
T$FSAA≃-000000
                                                                        WORD39=-000116
                                                                                                            WORD67= 000206
T$FSAB= 000004
                                                                       WORD4 = 000010
WORD40 = 000120
                                                                                                            WORD68 = - 000210
T$F$AC= 000014
                                                                                                           WORD69=-000212
WORD7 =-000016
 T$FSB2= 000010
                                    WORD13=-000032
                                                                       WORD41 = 000122
T$IB: =:000026
                                    WORD14= 0000034
                                                                        WORD42= 000124
                                                                                                            WORD70= .000214
                                                                                                                                               WORD99= 000306
                                                                       WORD43 = 000126
WORD44 = 000130
T$IBAR = . 000024
                                    WORD15= 000036
                                                                                                           WORD71=-000216
WORD72=-000220
                                                                                                                                               WRDVAL = 000310
XTREAD = 001000
T$IBE - = - 020000
                                    WORD16=-000040
T$IBF - - 040000
                                                                       WORD45= 000132
                                                                                                            WORD73=-000222
                                                                                                                                               XTWRTE = . 000400
 . ABS.
            ававава
                            ดดด
            природа
                            991
MRPR.
                            002
            001106
ERRORS DETECTED:
                           0
VIRTUAL MEMORY USED: 3569 WORDS (+14 PAGES)
DYNAMIC MEMORY: 4916 WORDS (-18 PAGES)
ELAPSED TIME: 00:00:47
MRPR, MRPR/-SP=[20,1]IM, [20,1]MRPR
```

```
MRREST- MACRO M1110 27-MAR-80 15:13 PAGE 5 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
                                                            FITLE ... MRREST. ...
       2
         000000
                                                           .PSECT: MRREST:
                                                           HARDWARE QUERY RESOLVER 'MANUAL' DEBUGGING AIDS
                                                           MATCH REPORT PROCESSOR ROUTINES
                                                           COMMANDS:
       9
                                                           ST
                                                                    STORE · INTO · AN · MRP · REGISTER
      10
                                                           RE
                                                                    READ FROM A REGISTER RESET MRP
                                                           RS
      i i
                                                                    GALL HOR LOADER
      13
                                                           ONCE A COMMAND HAS BEEN EXECUTED (OR AN ERROR ENCOUNTERED) THIS MODULE RETURNS CONTROL TO THE MODULE MRP AT LOCATION MRPXX.
      14
      15
       16
      18
                                                                                                                      THE PROPERTY OF A
      19
                                                           STORE: TABLE: OF: VALID: REGISTER: MNEMOONICS: AND: ASSOCIATED: ROUTINE
      21
22
23
                                                           ADDRESSES.
          000000
                                                 STITBL::
      24
25
          000000
                        103
                                 122
                                                           .ASCII
                                                                     ZCRZ
                                                                                                  : CONTROL - REG
          000002
000004
                    0002161
                                                           .WORD
                                                                     STICR
      26
                       192
                                 113
                                                           .ASCII
                                                                     /BK./
                                                                                                  ;BREAKPOINT REG
      27
          000006
                    000230
                                                                     ST1BK
                                                           .WORD
      28
29
          000010
                                                           .ASCII
                                 101
                                                                     7MA7
                                                                                                  : MEMORY - ADDRESS - REG
          000012
000014
                    0002521
                                                           .WORD
      30
                        129
                                 114
                                                           .ASCII
                                                                     /PL/
                                                                                                  :PIPELINE · REG · LEFT
      31
          000016
                    000314
                                                                     ST1PL
                                                           .WORD
          000020
                                 122
                                                           .ASCII
                        120
                                                                                                  :PIPELINE · REG · RIGHT
                                                                     ZPRZ
      33
34
          000022
                    000336
                                                                     STIPR
          000024
                        121
                                 122
                                                            .ASCII
                                                                     ZQRZ
                                                                                                  :Q-REG
      35
          000026
                    000360
                                                            .WORD
                                                                     STIDE
          000030
                                                            .ASCII
                        114
                                 127
                                                                     ZLWZ
                                                                                                  ; "WORD-LOCATION"
      37
          000032
                    000432:
                                                           .WORD
                                                                     STILW-
      38
          000034
000036
                       114
                                 123
                                                            .ASCII
                                                                     /LS/
                                                                                                  ; 'SENTENCE' LOCATION
      39
                    000440
                                                           . LIORD
                                                                     STILS
      40
          000040
                                                           .ASCII.
                                                                     ZLPZ
                        114
                                 120
                                                                                                  : "PARAGRAPH" LOCATION
      41
          000042
                    000446
                                                                     STILPG-
                                                           .WORD
      42
43
44
                    000011
                                                 STILN
                                                                     <.-ST1TBL>/4
                                                           LOCATION - WORD - WORD - AREAS -
      45
                                                 LOCURD: .WORD
      46
          000044
                    666666
      47
          000046
                    000000
                             040000
                                       100000
                                                 LOCTBL: .WORD
                                                                    0.BIT14.BIT15.BIT15+BIT14
          000054
                    140000
      49
50
51
                                                           READ
      52
                                                           TABLE OF VALID REGISTER MNEMONICS AND ASSOCIATED ROUTINE
      53
54
                                                           ADDRESSES.
                                                                                                             000056
                                                 RE1TBL::
```

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000056

115

101

```
MRREST MO M1110 27-MAR-80 15:13 PAGE 5-1
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          000060
                      3005641
                                                                  . WORD
                                                                             RE IMA
       58
          000062
                          115
                                                                  .ASCII.
                                                                             /MP/
                                                                                                             ;READ · MICROPGM · ADDR ·
       59
          ййййй64
                      0006123
                                                                  .WORD
                                                                             REIMP
      60
           000066
                          123
                                     127
                                                                  .ASCIL
                                                                             /SW/
                                                                                                             :READ UNIBUS STATUS WORD
      61
          000070
                      000644
                                                                            RE1SM
                                                                  . MORD
      62
63
          000072
                         104
                                     127
                                                                  .ASCII.
                                                                                                             #READ UNIBUS DATA WORD F FREE PROPERTY AND
                                                                             ZDUZ
                     000736
          000074
                                                                  .WORD
                                                                             REIDW.
      64
                     000004
                                                       RE1LH-
                                                                             <.-RE1TBL>/4
      65
      66
67
                                                                  STORE.
       68
                                                                 PERFORM THIRD LEVEL PARSING
EG. IN THE COMMAND:
MR>ST-0 CR
      69
70
                                                                 PARSE THE '0'
       73
74
          000076
       75
          000076
                                                                                                             :FIND OPERAND IN COMMAND LINE:
OK, CONTINUE:
NOTHING THERE:
RETURN TO MRP (PROMPT)
:CONVERT VALUE IN COMMAND LINE TO BINARY
                                                                 CALL
                                                                            FIND
           000102
                      103004
                                                                 BCC.
       77
           000104
                                                                 CALL
                                                                            ERR4
       78
          000110
                     000167
                                000354
                                                                  JMP
                                                                            STIX
           000114
                                                       1$:
                                                                 CALL
                                                                            PACK
          000120
      80
                      103004
                                                                 BCC
                                                                             2$
      81
82
          000122
                                                                 CALL
                                                                            ERR5
                                                                                                             : INVALID - NUMERIC -
          000126
                     000167 000336
                                                                            STIX
      83
      84
85
                                                                 CONTINUE PARSING THE COMMAND LINE FIND THE REGISTER MNEMONIC
                                                       ;
      86
      87
           000132
                                                       2$:
                                                                 CALL
BCC+
                                                                            FIND
                                                                                                             ;LOCATE · A · NON-BLANK ·
      88
          000136
                      103004
                                                                            3$
      89
          000140
                                                                 CALL
                                                                            ERR4
                                                                                                             :NOTHING · THERE · - ERROR
           000144
                     000167
                                000320
      91
                                                                 MATCH-REGISTER-MNEMONIC-FROM-THE COMMAND-LINE-AGAINST THE-TABLE-OF VALID-MNEMONICS:
      92
93
      94
      95
          000150
                     012700
                                000011
                                                                                                             :NUMBER: OF TABLE: ENTRIES:
:R2:-> TABLE:
:MATCH: AGAINST: COMMAND: LINE
:OK; CONTINUE:
                                                      3$:
                                                                 MOV-
                                                                            #ST1LH,R0
      96
          000154
000160
                     012702
                                                                 MOV-
                                                                            #ST1TBL:R2
      97
                                                                 CALL
                                                                            SCAN
      98
99
          000164
                      103004
                                                                 BCC -
                                                                            4$
          000166
                                                                 CALL
                                                                            ERR6
     100
          000172
                     000167
                                000272
                                                                            ST1X
     101
     102
                                                                 SAVE-THE-POINTER-TO-THE-ROUTINE-ASSOCIATED WITH-THE-REGISTER, R1 -> ROUTINE-ADDRESS.
CALL-ROUTINE TO-SCAN-COMMAND-LINE-FOR-LOOP INDICATOR.
     103
     104
     105
                                                                 EG. MR>ST-0 CR.L.
LOOP-FLAG-WILL-BE-SET-IF-INDICATOR-IS-PRESENT.
JUMP-TO-ROUTINE-TO-LOAD-REGISTER.
     106
                                                                                                             SAVE POINTER TOARTH
     197
     108
     109
          000176 010167
                                000000G
                                                      4$:
                                                                 MCV-
                                                                            R1.RTHPT.
                                                                                                             ;LOOP?
;POINT TO ROUTINE
     110 000202
                                                                 CALL
     111 000206
                     016701
                                000000G
                                                      STIIN:
                                                                            RTHPT, R1
                                                                 MOV-
     112-000212- 000171
                                000000
                                                                                                             ; EXECUTE ROUTINE
                                             Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
```

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MRREST- MACRO M1110 27-MAR-80 15:13 PAGE 5-2
                                        Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
     114
     115
                                                           MRP · CONTROL · REG ·
     116
     117 000216
                                                 STIGR::
     118 000216
                             000000G
                                                           MOV.
                                                                                                  :MOVE-DATA TO-LOD-BUS-REG:
:DIRECT-CNTL-WORD-TO MRP-
:TEST-LOOP FLAG-
                   016746
                                                                    BINUD, - (SP)
     119 000222
                                                           CALL:
                                                                    MRPCR
    120
         000226
                   000512
                                                                    STILP
     i22
                                                           BREAKPOINT REG
     123
         000230
     124
                                                 ST1BK::
     125
                                                                                                  SET MRP CHTL FOR BREAKPOINT
DIRECT CHTL WORD WOMEN
LOAD DATA WORD INTO LOAD BUS REG
                                                           MOV:
                                                                     #MBKCLKEH,-(SP)
         000230
                   012746
                             000400
          000234
                                                           CALL
                                                                    MRPCR -
     127
         000240
                   016746
                             000000G
                                                           MOV-
                                                                    BINWD, - (SP)
     128 - 000244
                                                                                                  ;SET.BCE.CNTL.WORD.
;TEST.LOOP FLAG.
                                                           CALL
                                                                    LBMRP
         000250
                    000501
                                                                    STILP
     130
     131
                                                           MEMORY ADDRESS REG
                                                                                                             -----
     132
     133
         000252
     134
         000252
                   012746
                             000200
                                                           MCV.
                                                                     #<PLR.EN>,-(SP)
                                                                                                  :SET - CHTL - BITS - FOR - MRP
     135
         000256
                                                           CALL
                                                                    MRPCR -
                                                                                                  :DIRECT CNTL WORD TO MRP
     136
          000262
                   012746
                             002000
                                                           MOV.
                                                                    #≺MAR.LOD>,-(SP)
                                                                                                  :CNTL BITS TO LOAD MAR
;SEND THEM TO MRP
                                                                                                                                           NS
          000266
                                                           CALL
                                                                    LBMRP
                                                                                                  CLEAR PLR-RT ENABLE BITS
     138
         000272
                   012746
                             000001
                                                           MOV-
                                                                     #MAREN1, -(SP)
                                                                                                                                          NS.
     139
         000276
                                                                                                  :AND-SET MAREN1 IN-CR:
;MOVE-DATA WORD-TO-LOD-BUS-REG
;SEND-DATA TO-MRP-(MAR)
                                                           CALL
                                                                    MRPCR -
                                                                                                                                           NS.
     140
          000302
                   016746
                             000000G
                                                           MOV.
                                                                    BINWD, - (SP)
     141
         000306
                                                           CALL
                                                                    LBMRP
     142
         000312
                   000460
                                                           BR
                                                                    STILP
     143
     144
                                                           PIPELINE REG LEFT.
     145
          000314
     146
                                                 STIPL::
     147
          000314
                    012746
                             000202
                                                           MOV:
                                                                     #<PLR:EN+MMLEFT>,-(SP)
                                                                                                  :BIT PATTERN FOR PLR LERT
     148
          000320
                                                                                                  DIRECT CATL WORD TO MRP.
MOVE DATA WORD TO LOD BUS REG.
SEND DATA WWORD TO MRP.
                                                           CALL
                                                                    MRPCR -
     149
          000324
                    016746
                             000000G
                                                           MOV.
                                                                    BINUD, - (SP)
     150
         000330
                                                           CALL
                                                                    LBMRP
     15 i
         000334
                    000447
                                                                    STILP
     153
                                                           PIPELINE REG RIGHT
     154
     155
          000336
                                                 STIPR::
          000336
     156
                    012746
                             000200
                                                           MOV.
                                                                     #<PLR.EN>,-(SP)
                                                                                                  ; CNTL - WORD FOR - PLR - RT -
     157
          000342
                                                                                                  DIRECT CHTL WORD TO MRP : MOVE DATA WORD TO LOD BUS REG
                                                           CALL
                                                                    MRPCR.
          000346
                    016746
                                                           MCV
                                                                    BINWD, - (SP)
     159
         000352
                                                           CALL
                                                                     LBMRP
                                                                                                  :SEND DATA WORD TO MRP
     160
         000356
                    000436
                                                           BR
                                                                    STILP
     161
     162
                                                           Q-REG
     163
     164
         000360
                                                 STIOR::
          000360
                                                                     #<PLR.EN>.-(SP)
                   012746
                             000200
                                                           MOV-
                                                                                                  ;BIT-PATTN FOR-PLR-RT-
;DIRECT-CNTL-WORD-TO MRP
     166
         000364
                                                           CALL
                                                                     MRPCR
                                                                                                  SEND PATTN TO ME
                   012746
                                                                     #RGQ.EN,-(SP)
     167
         666376
                             000200
                                                           MOV-
         000374
                                                           CALL
                                                                    LBMRP
         000400
                   012746 000202
     170
                                        Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
```

```
0 M1110 27-MAR-80 15:13 PAGE 5-3
Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
171 000404
                                                        CALL
                                                                  MRPCR
                                                                                                :DIRECT-CHTL-WORD-TO MRP-
:BIT-PATTH TO-GENERATE-Q-REG-RDY-
                                                                 #RGQ.VAL,-(SP)
LBMRP
    000410
               012746
                         020000
                                                        MOV.
173 000414
174 000420
175 000424
                                                                                                SEND PATTN TO MRP DATA FOR DESTINATION SEND TO MRP
                                                        CALL
               016746
                         000000G
                                                        MOV.
                                                                  BINWD, - (SP)
                                                        CALL
                                                                  LBMRP
176
177
    000430
               000411
178
179
                                                        WORD-LOCATION
                                              ST1LW::
180 000432
181
     000432
                                                        CALL
                                                                 LOC1W-
ST1LP-
182-000436
               000406
183
184
                                                        SENTENCE - LOCATION -
185
186
     000440
                                              STILS::
187
     000440
000444
                                                        CALL
                                                                  LOCIS-
188
               000403
                                                        BR
                                                                  STILP
189
190
                                                        PARAGRAPH LOCATION
191
     000446
                                              STILPG::
193 000446
                                                                  LOCIP
194 000452
               000400
                                                        BR
195
196
197 000454
198 000454
199 000462
               032767
001402
                         000000G · 000000G
                                                                  #LOOP, BASE
                                                                                                 :LOOP ON COMMAND
                                                        BEO
                                                                                                 ;NO. EXIT:
;EXECUTE ROUTINE AGAIN:
                                                                  ST1X
200
201
     000464
               000167
                         177516
                                                        IMP
                                                                  STIIN
202 000470
                                              ST1X:
203 000470
                                                        CALL
                                                                  KILL
                                                                                                 ;KILL-AST-(IF-THERE-WAS-ONE)
204 000474
               000167
                         000000G
                                                        JMP
                                                                  MRPXX.
```

MRREST- M

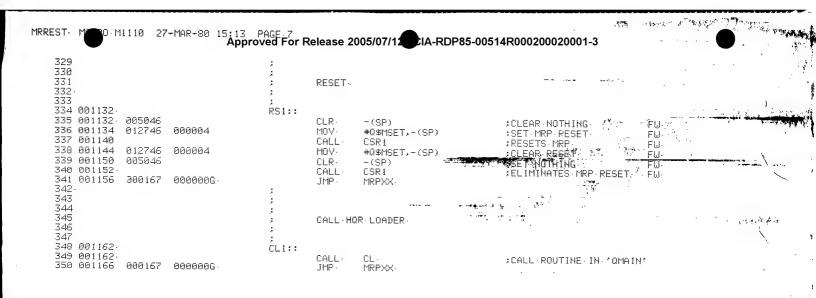
```
MRREST MACRO N 110 27-MAR-80 15:13 PAGE 6 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
      206
      207
      298
                                                                        READ
                                                                        PERFORM. THIRD. LEVEL . PARSING
     209
     210
211
212
213
                                                                        EG. IN THE COMMAND:
MR>RE CR
PARSE THE CR
     214
215 000500
                                                            RE1::
     216 000500
217 000504
218 000506
                                                                        CALL
                                                                                    FIND
                                                                                                                        :FIND-A-REGISTER-MNEMONIC-IN-COMMAND-LINE-
                        193994
                                                                        BCC.
                                                                                    1$
                                                                                                                        OK, CONTINUE:
NOTHING THERE:
RETURN:TO MRP:(PROMPT)
                                                                                    ERR4
                                                                        CALL
     219 000512-
220
                       000167 000376
                                                                        JMP
                                                                                    RE1X
      221
                                                                        \label{eq:match} \begin{array}{ll} \mathsf{MATCH} \cdot \mathsf{THE} \cdot \mathsf{REGISTER} \cdot \mathsf{MNEMONIC} \cdot \mathsf{FROM} & \mathsf{THE} \cdot \mathsf{COMMAND} \cdot \mathsf{LINE} \cdot \mathsf{AGAINST} \\ \mathsf{THE} \cdot \mathsf{TABLE} \cdot \mathsf{OF} & \mathsf{VALID} \cdot \mathsf{MNEMONICS} \end{array}
     222
223
           000516
                        012700
                                    0000004
                                                                                    #RE1LN,R0
                                                                                                                        ;NUMBER.OF TABLE.ENTRIES.
;R2.-> TABLE.
           000522
                       012702
                                   000056
                                                                        MOV
                                                                                    #RE1TBL,R2
     226
           000526
                                                                        CALL
     225
227
228
229
230
231
                                                                                    SCAN
                                                                                                                        : MATCH - AGAINST - COMMAND - LINE
           999532
                        103004
                                                                        BCC.
                                                                                    2$
                                                                                                                        OK, CONTINUE
           000534
                                                                        CALL
                                                                                    ERR6
           000540
                       000167
                                   000350
                                                                        JMP.
                                                                                    RE1X
                                                                       SAVE THE POINTER TO THE ROUTINE ASSOCIATED WITH THE REGISTER, R1 -> ROUTINE ADDRESS.
CALL ROUTINE TO SCAN THE COMMAND LINE FOR LOOP INDICATOR.
      232
      233
234
                                                                        EG. MR>RE-CR L.
LOOP-FLAG-WILL-BE-SET-IF-INDICATOR-IS-PRESENT.
JUMP-TO-ROUTINE-TO-READ-REGISTER.
      235
      236
      238 000544
                       010167
                                   000000G
                                                            2$:
                                                                        MOV.
                                                                                    R1.RTHPT
                                                                                                                        ;SAVE · POINTER · TO · RTN
     239 000550
                                                                        CALL.
                                                                                    LOOPR.
                                                                                                                        :L00P?
     240
           000554
                       016701
                                   000000G
                                                            RE1IN:
                                                                                    RTHPT, R1
                                                                                                                        :POINT TO ROUTINE :EXECUTE ROUTINE
     241
242
243
           000560
                       000171
                                   000000
                                                                        JIMP -
                                                                                    @(R1)
     244
                                                                        MEMORY-ADDRESS-REG
      245
      246
           000564
                                                            REIMA::
     247
           000564
000570
                       012746
                                   000040
                                                                                    #MAR.OUT,-(SP)
     248
                                                                        CALL
                                                                                                                        :DIRECT:CNTL:WORD:TO MRP
:GET:WORD:FROM:MRP:
      249
           000574
                                                                        CALL
                                                                                    MRPLB
     250 000600
251 000602
                                                                        CLR -
                                                                                    -(SP)
                                                                                                                         CLEAR THE CONTROL REG
                                                                        CALL
                                                                                    MRPCR .
           000606
                       012601
                                                                        MOV.
                                                                                    (SP) + R1
                                                                                                                        :WORD RETURNED ON STACK
     253 000610
                                                                                   REIPUT
     254
                                                                        MICROPGM-ADDRESS-REG
     257 000612
                                                           REIMP::
     258 000612- 012746
                                                                                    #MMADRD,-(SP)
                                                                       1107
     259 000616
                                                                        CALL
                                                                                   MRPCR -
                                                                                                                        GET WORD FROM RE
                                                                                                                                                                              17,6 H. J.
     260 000622
                                                                       CALL
                                                                                   MRPLB
          000626
     261
                                                                                                                                                                   '; NS
                                                                       CLR
                                                                                    -(SP)
                                                                                                                        ; CLEAR THE : CONTROL REG:
     262-000630
                                                                        CALL
```

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MRREST- M
              0·M1110
                                                          MOV:
    263 000634
                   012601
                                                                    (SP) + R1
                                                                                                 :WORD RETURNED ON STACK
                                                                                                 :MASK OFF UNNECESSARY BITS
    264 000636
                   042701
                             177400
                                                                    #177400.R1
    265
         000642
                   000501
                                                                    RE I PUT
    266
                                                          UNIBUS - STATUS - REG
    267
                                                 ;
    268
    269 000644
                                                 RE1SW::
    270
         000644
                   012746
                             000202
                                                          MOV
                                                                    #<PLR:EN+MMLEFT>,-(SP)
                                                                                                 ;PL·LEFT
                                                                                                                          NS
         000650
                                                          CALL
                                                                    MRPCR -
                                                                                                 DIRECT CHTL WORD TO MRP HS
     272
         000654
                   005046
                                                          CLR
                                                                                                 :DATA - WORD
                                                                                                                       NS
     273 000656
                                                          CALL
                                                                    LBMRP
                                                                                                 :SEND-WORD TO-MRP-
         000662
                   012746
                                                                    #<PLR.EN>,-(SP)
                                                                                                 :PL-RIGHT NS
:DIRECT-CNTL-WORD-TO MRP
:MASTER-SYNC-
                             000200
                                                          MOV.
     275
         000666
                                                          CALL
                                                                    MRPCR
                   012746
    .276
         000672
                             ававья
                                                          MOV-
                                                                    #<UBD.IN+MSYN>,-(SP)
                                                                                                 :MASTER SYNC
:SEND WORD TO MRP
:READ STATUS WORD FROM MRP
:CLEAR PLR EN BIT
     277
         000676
                                                          CALL
                                                                    LBMRP
     278
         000702
                                                          CALL
                                                                    MRPL B
     279
         000706
                   012746
                                                          MOV
                                                                    #<PLR:EN>,-(SP)
     280 000712
                                                          CALL
                                                                    MRPCR
     281
                   005046
         00071E
                                                          CLR
                                                                    -(SP)
                                                                                                 :CLEAR - PLR-RT-
                                                                                                                                   NS
     282
         000720
                                                                                                 SEND WORD TO MRP
                                                          CALL
                                                                    LBMRP
         000724
                   005046
                                                          CLR
                                                                    -(SP)
     284 000726
                                                          CALL
                                                                    MRPCR
     285 000732
                   012601
                                                          MOV-
                                                                                                 :WORD-RETURNED-ON-STACK
         000734
     286
                   000444
                                                          BR
                                                                    RE1PUT
                                                                                                 :AND PRINT
     288
                                                          UNIBUS DATA WORD
     289
290
         000736
                                                 REIDW::
                                                                                                 :SET.CR.FOR.PL LEFT
:DIRECT.CNTL.WORD.TO MRP.
     291 000736
292 000742
                   012746
                             000202
                                                          MOV
                                                                    #<PLR.EN+MMLEFT>,-(SP)
                                                                                                                                  NS
                                                          CALL
                                                                    MRPCR
                                                                                                                                   NS
     293
         000746
                                                                                                 SET DATA WORD ADDRESS BIT NS
SEND WORD TO MRP PLR-LEFT NS
SET CR FOR PL RIGHT NS
DIRECT CNTL WORD TO MRP
                   012746
                             010000
                                                          MOV:
                                                                    #A01, -(SP)
     294
         000752
                                                          CALL
                                                                    LBMRP
     295
         000756
                   012746
                             000200
                                                          MOV
                                                                    #<PLR.EN>,-(SP)
          000762
     296
                                                          CALL
                                                                    MRPCR
          000766
                   012746
                             000060
                                                          MOV.
                                                                    #<UBD: IN+MSYN>,-(SP)
                                                                                                 :SET MASTER SYNC, UBD. IN IN PLR RT:
:SEND WORD TO MRP
:READ DATA WORD FROM MRP NS
                                                                                                                                                 NS-
     298
         000772
                                                          CALL
                                                                    LBMRP
     299
         000776
                                                           CALL
                                                                                                                                        NS.
     300
         001002
                                                                                                                             NS-
                   012746
                             000200
                                                          MOV.
                                                                    #<PLR.EN>,-(SP)
                                                                                                 ;CLEAR PLR EN BIT
          001006
                                                          CALL
                                                                    MRPCR -
     302-001012
                   005046
                                                                                                 :CLEAR PLR-RT
     303
         001014
                                                          CALL
                                                                    I BMRP
                                                                                                 :SEND-WORD TO-MRP.
     304
          001020
                                                                    #<MMLEFT+PLR.EN>,-(SP)
                   012746
                                                          MOV
                                                                                                 #PL·LEFT:
                                                                                                                               NS
     385
         001024
                                                          CALL
                                                                                                 ; DIRECT CNTL WORD TO MRP
                                                                                                                                            NS
     306
          001030
                   005046
                                                          CLR
                                                                     -(SP)
                                                                                                 CLEAR PLR-LT.
     307
          001032
                                                          CALL
                                                                    LBMRP
                                                                                                                                     NS.
     308 001036
                   005046
                                                          CLR
                                                                    -(SP)
                                                                                                 :CLEAR MRP CR
     309
         001040
                                                          CALL
                                                                    MRPCR
     310
         001044
                   012601
                                                          MOV
                                                                    (SP) + .R1
                                                                                                 ; WORD - RETURNED - ON - STACK -
     311
     312
313
         001046
                   032767
                             000000G · 000000G · RE1PUT:
                                                          RIT
                                                                    #ONCE, BASE
                                                                                                 ; PRINTED ONCE ?
         001054
     314
                   001011
                                                          BNF
                                                                                                 :YES, SKIEP:
:SET-FLAG-FOR-PRITTED TO NCE
                                                                    1$
     315 001056
                   052767
                             000000G · 000000G
                                                                    #ONCE, BASE
                                                                    #PRINT, R5
     316 001064
                   012705
                             000000G
                                                          MOV
                                                                                                 :POINT-TO-PRINT-LINE
     317
         001070
                                                          CALL
                                                                    HNPK
                                                                                                 :CONVERT. VALUE - IN - R1 FOR - PRINTING
    318
         001074
                                                                   CONSOL
                                                          CALL
                                                                                                 : PRINT ON CONSOLE
    319
                                        Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
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320 001100 321 001106 322 001110 323 324 001114 325 001114 326 001122 327 001126 032767 001402 000167 000000G-000000G-1\$: #LOOP,BASE RE1X RE1IN BIT-:REPEAT: :NO. EXIT: :EXECUTE:ROUTINE:AGAIN: BEQ 177440 042767 000000G-000000G-BIC: #ONCE, BASE ;CLEAR:PRINT:CONTROL FLAG: ;KILL:AST: CALL JMP 000000G 000167 MRPXX.



352 353 354 355 STORE · INTO · LOCATION · WORDS 356 357 001172 358 001176 LOCIP:: INC 005267 176646 LOCURD: ; PARAGRAPH 005267 176642 LOCWRD. :SENTENCE 359 001202 360 001202 LOCIW:: :WORD #<PLR.EN>,-(SP) 012746 000200 361 001206 CALL MRPCR 362-001212 012746 000100 #LOC.EN,-(SP) MOV. CALL LBMRP .

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000001

379

#SET BIT-PATTN FOR-PLR-RT
#DIRECT-CNTL-WORD-TO MRP#SET-BIT-PATTN-FOR-LOC-ENABLE
#SEND-WORD TO-MRP-363 001216 364 365 001222 012746 000202 MOV. :SET-BIT-PATTN-FOR-PLR-LEFT :DIRECT-CNTL-WORD-TO MRP-:* DETERMINE-WHICH-LOCATION-#<PLR:EN+MMLEFT>,-(SP) 366 001226 367 001232 CALL MRPCR 991232 016700 176606 MOV. LOCURD, RØ 001236 006300 ASL MOV :* WORD.TO SEND.TO. :* THE.MRP 369 001240 370 001244 371 LOCTBL(R0).-(SP) LBMRP. 016046 CALL :SEND-LOC-WORD-372-001250 373-001252 374-001256 GLR. CALL 005046 -(SP) MRPCR: ; DISABLE-PIPELIN-REGISTER- ; F.W. 8/31 016746 000000G MOV. BINWD, - (SP) #MOVE-USER VALUE-TO-LOD-BUS-#SEND-VALUE-TO-MRP-#RESET-375 001262 CALL CLR LBMRP 376 001266 377 001272 378 005067 LOCURD RETURN.

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.END

MRREST- Marco M1110 27-MAR-80 15:13 PAGE 8-1 SYMBOL TA Approved For F Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3 ALTICKE = 040000 BYTE40= 0000050 BYTE92=-000134 MMLEFT=:000002: MMOE: =:000004 MMURTE=:000010 Q\$MRP - = - 000040 ALUOE - 004000 A01 - 010000 BASE - ****** BYTE41=-000051 BYTE42=-000052 BYTE93 = 000135 BYTE94 = 000136 Q\$MRP2=.000240 Q\$MSC.=.04000 BYTE43= 000053 BYTE95= 000137 MNOBRE = · 100000 Q\$MSET= 000004 BYTE44= 000054 BYTE45= 000055 BINWD . = . ***** 3X. BYTE96 = . 000140 MREN1 = 000001 MREN2 = 020000 Q\$MSP -= 100000 BITVAL = 000000 BYTE97=-000141 BYTE98=-000142 Q\$NCLK= 176000 Q\$PP = 000100 = 000001 BYTE46= 000056 MRPCR - = · ****** GX · BIT1 = 0000002 BYTE47= 000057 BYTE99= 000143 MRPLB = ********* GX** MRPXX = ******** GX** MSYN = **000040 Q\$PPSW= 000320 BIT10 = 002000 BIT11 = 004000 BYTE48= 0000060 BYTVAL = . 000144 Q\$PP2. = . 000300 BYTE49= 0000061 BYTE5 = 000005 CBKALL = 001000 CBKCLK = 000400 CL = ******** GX** Q\$QHLT= 000013 BIT12 - 010000 Q\$QL = 000043 BIT13 = 020000 BIT14 = 040000 ONCE: = ******* GX: PACK: = ******* GX: BYTE50= 000062 Q\$QLA - = - 000053 BYTE51= 000063 CL 1 001162RG 002 Q\$QLB - = - 000054 BIT15 = 100000 BIT2 = 000004 CHOBRE = 100000 CONSOL = ******* GX BYTE52 = 000064 PLB. = -000010 Q\$QLR · = · 000001 Q\$QW = · 000042 BYTE53= 0000065 = · 000020 = · 000030 PLC . = 000010 BIT3 BYTE54= 000066 BYTE55= 000067 CPCCEN= 010000 PLD. Q\$RDCD= 000005 = 0000026 CPREAD = 040000 CPWRTE = 020000 PLRWR - - 000200 Q\$RDMD= 000006 = · 000040 = · 000100 BIT5 BYTE56= 000070 PLR.EN= 000200 Q\$REBK= 001000 BITS BYTE57= 0000071 CSADRD = . 000004 PRINT: =: ***** GX Q\$RNC -- 006000 Q\$RSC -- 004000 = 000200 BIT7 BYTE58=-000072 CSEQCI = 100000 CSOE - 000040 QR\$CR1= 176420 = 000400 BITS BYTE59= 000073 QR\$CR2= · 176422 QR\$LBR= · 176424 Q\$RSET= 000010 = 001000 BIT9 BYTE6 = 000006 CSR1 = · ******* GX · Q\$SM = 100000 Q\$SP = 000120 BYTE0 = 000000 BYTE60 = . 000074 CSWRTE = - 000100 Q\$ATTN= 000100 BYTE: = 000001 BYTE61= 000075 Q\$BCL - = - 000001 Q\$CCCP = - 000040 Q\$CHB - = - 000400 DBR.RD= 000001 DB\$CPP= 001457 Q\$SP2 - = - 000340 BYTE10= 000012 BYTE11= 000013 BYTE62= 000076 RE 1 000500RG BYTE63=-000077 BYTE64=-000100 BYTE65=-000101 DB\$SPT= 000026 RE1DW-000736RG BYTE12= 000014 DB\$TPC=-000023 Q\$CHRL= 000200 RE1IN - = -000554R 002 BYTE13= 000015 DISPGS=-100000 DMAAWR=-000005 Q\$CLR.=.000040 Q\$CNC.=.030000 Q\$CP.=.000060 000004 G BYTE14= 000016 BYTE15= 000017 BYTE66=-000102 RE IMA 000564RĞ 002 BYTE67= 000103 DMARRD= 000003 000612RG RE1MP 002 BYTE16= 0000020 BYTE68= 000104 Q\$CPCC= 000010 Q\$CP2 = 000260 Q\$CSC = 010000 DMARWR = . 000004 REIPHT. 001046R 002 BYTE17= 000021 BYTE69= 000105 ENBR - = 010000 RE1SW-000644RG ์ตีด2 BYTE18= 000022 BYTE19= 000023 BYTE7 = 0000007 = · ****** GX · ERR4 REITBL 000056RG ัดด2 BYTE70= 0000106 BYTE71= 000107 BYTE72= 000110 EPR5 = · ********** GX · Q\$CSEL=-000360 RE1X 001114R BYTE2 - = - 000002 = · ********* GX ERR6 Q\$CSET= 000002 RGO.EN= 000200 --RGO.VA= 020000--BYTE20= 000024 Q\$CSP.=.020000 Q\$DMA.=.000001 Q\$ENBK=.040000 FIND . BYTE21= 000025 BYTE73= 000111 = ****** GX KILL. 001132RG 002 BYTE22= : 000026 BYTE74= 000112 BYTE75= 000113 RTNPT = жжжжжж GX-SCAN = жжжжжж GX-LBMRP ·= · ***** GX BYTE23=-000027 LOCTBL -000046R 002 · Q\$ENOP = · 020000 BYTE24= 000030 BYTE25= 000031 BYTE26= 000032 BYTE76= 000114 LOCWRD : 000044 LOC:EN= 000100 002·Q\$FAL·=·004000 Q\$FC·=·000045 000044R SEQ.CI= 000010 BYTE77= 000115 ST1 ST1BK 000076RG BYTE78= . 000116 LOC.WA= 040000 = 000044 000230RG 992 BYTE27= 0000033 BYTE79= 000117 LOC:WB= 100000 Q\$FP - - 000046 002 Q\$HBF - - 000002 STICR 000216RG 002 BYTE28= 000034 BYTE29= 000035 BYTE8 = 000010 LOC1P. 001172RG STIIN-BYTE80= 000120 BYTE81= 000121 L0015. 001176RG ·Q\$ICP· = ·000006 STILN-000011 G BYTE3 = 000003 ·LOC1W-001202RG 002 · Q\$IHB · = · 000003 STILP 000454R 002 BYTE30= 000036 BYTE82 = . 000122 . LOOP - ****** GX Q\$IHRL= 000002 Q\$IMRP= 000007 ST1LPG 002 BYTE31= 000037 BYTE32= 000040 BYTE83= 000123 LOOPR · = · ***** GX STILS: 000440RG 002 MAREN1 = 000001 MAREN2 = 004000 BYTE84=:000124 Q\$LBD - - 001000 000432RG 992 BYTE33= 000041 BYTE85 = . 000125 Q\$LBDP=-001001 Q\$LBP-=-000001 000252RG 00Ž 6YTE34= 000042 6YTE35= 000043 BYTE86=-000126 MARLOD = 010000 STIPL STIPR 000314RG MAROUT= 000002 MAR.LO= 002000 MAR.OU= 000040 BYTE87 = . 000127 Q\$LDCD= 000003 ซ์ตีวิ 💞 000336RG BYTE36= 000044 BYTE88 - . 000130 Q\$LDMD = . 000004 STIQR 002 00**03**60RG BYTE89= 000131 BYTE37 = . 000045 Q\$LDPP=:002000 ST1TBL 000000RG 002 BYTE38= 000046 MBKALL= 001000 MBKCLK= 000400 BYTE9 = 000011 Q\$LHP - = - 010000 ST1X 000470R 002 BYTE39= 000047 BYTE90= 000132 Q\$MNC -- 140000 S\$CLR∙ - . 000000 BYTE4 = 000004 MMADRD= 080100 usnik - 000032 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3 MMADRD = . 000100 BYTE91=-000133

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Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
SYMBOL . TABLE
                                 T$F$B2=.000010
T$IB. =.000026
3$QB--=-000005
                                                                   WORD14= 000034
                                                                                                     WORD44=-000130
                                                                                                                                      WORD73= 000222
                                                                   WORD15= 000036
WORD16= 000040
5$QR - - 000006
                                                                                                    WORD45=-000132
                                                                                                                                       WORD74=.000224
S$0×
                                 T$IBAR = . 000024
                                                                                                    WORD46 = 000134
                                                                                                                                      WORD75= 000226
WORD76= 000230
                                                                   WORD17= 000042
        = 000007
                                                                                                     WORD47= 000136
S$SR
        = - 0000010
                                 T$IBF - = - 040000
T$ICD - = - 000040
5351
                                                                   WORD18= 000044
                                                                                                     WORD48= 000140
                                                                                                                                      WORD77=-000232
        = 000014
3$$2
                                                                   WORD19=-000046
WORD2-=-000004
                                                                                                    WORD49 = 000142
WORD5 = 000012
                                                                                                                                       WORD78= 000234
TD$CTR=-176370
                                 T$MODE= 004000
                                                                                                                                      WORD79= 000236
WORD8 = 000020
TD$CTW= 176360
TD$INL= 004000
                                 T$08 - 000036
T$08E - 004000
                                                                   WORD20=-000050
                                                                                                     WORD50= 000144
                                                                   WORD21=-000052-
WORD22=-000054
WORD23=-000056
                                                                                                     WORD51= 000146
                                                                                                                                      WORD80= 000240
TD$MEM=:000270
                                 T$08F · = · 010000
                                                                                                    WORD52=-000150
                                                                                                                                      WORD81= 000242
TD$OAR= 176344
                                 T$0BRA= · 000034
                                                                                                    WORD53=-000152
                                                                                                                                      WORD82= 000244
WORD83= 000246
TD$OTR=-176346
TD$QRD=-000274
TD$SW-=-176376
                                  T$08WA=-000032
                                                                   WORD24- 000060
                                                                                                     WORD54= 000154
                                 T$08WH= 000032
T$08WH= 100000
T$RBDO= 000200
T$RNB = 000040
T$RSET= 040000
T$SC = 000022
                                                                   WORD25=-000062
                                                                                                     WORD55= 000156
                                                                                                                                      WORD84= 000250
                                                                   WORD26 = . 000064
                                                                                                    WORD56 = 000160
WORD57 = 000162
                                                                                                                                      WORD85= 000252
TD$TAR=:176372
                                                                   WORD27= 000066
                                                                                                                                      WORD86= 000254
WORD87= 000256
TD$TAW= 176362
                                                                   WORD28--000070
                                                                                                     WORD58= 000164
TD$TDR= · 176374
                                                                   WORD29=-000072
WORD3 =-000006
                                                                                                     WORD59=-000166
                                                                                                                                      WORD88= 000260
                                 T$SCLK=-020000
TD$TDW= 176364
                                                                                                    WORD6 = 000014
                                                                                                                                      WORD89= 000262* WORD9 = 000022:
T$AD - - 000020
T$BA - - 000002
                                 T$SEG1 = 000000
T$SEG2 = 000001
                                                                   WORD30 = . 000074
                                                                                                     WORD60= 0000170
                                                                   WORD31= 0000076
                                                                                                     WORD61=-000172
                                                                                                                                      WORD90 = 000264
T$BD· = 0000010
                                 T$SEG3=-000002
                                                                   WORD32= 000100
                                                                                                    WORD62= 000174
WORD63= 000176
                                                                                                                                      WORD91=-000266
T$BSO - = - 100000
                                 T$SO - - 000001
                                                                   WORD33=-000102
                                                                                                                                      WORD92= 000270
WORD93= 000272
                                 T$UBUS= · 100000
T$1CLK= · 000400
T$8BEN= · 000020
T$8T. = 0000020
                                                                   WORD34= 000104
                                                                                                     WORD64= 000200
T$BTAR = . 000030
                                                                   WORD35=:000106
                                                                                                     WORD65--000202
                                                                                                                                      WORD94= 000274
T$BTD = 002000
                                                                   WORD36=-000110
WORD37=-000112-
                                                                                                    WORD66=-000204
WORD67=-000206
                                                                                                                                      WORD95= 000276
T$CD - - 000100
                                 UBD: IN= 000020
                                                                                                                                      WORD96 = 000300
WORD97 = 000302
T$CLK - = - 002000
                                                                   WORD38= 000114
                                                                                                    WORD68= 000210
T$DISK=-000200
T$DRD-=-000004
                                 WORD0 = 000000
WORD1 = 000002
                                                                   WORD39= 000116
                                                                                                     WORD69=-000212
                                                                                                                                      ₩ORD98= 000304
                                                                   WORD4 = 0000010
                                                                                                    WORD7 = 000016
                                                                                                                                      WORD99= 000306
                                                                   WORD40= 000120
T$EMEM= 010000
                                 WORD10= 0000024
                                                                                                    WORD70= 000214
WORD71= 000216
                                                                                                                                      WRDVAL = - 000310
T$F$AA=:000000
                                 WORD11= 000026
                                                                   WORD41= 000122
                                                                                                                                      XTREAD= 001000
                                 WORD12= 0000030
WORD13= 000032
T$F$AB=:000004
                                                                   WORD42= 000124
                                                                                                    WORD72= 000220
                                                                                                                                      XTWRTE = . 000400
T$FSAC=-000014
                                                                   WORD43=-000126
. ABS:
           000000
                          000
           000000
                          001
MRREST.
           001274
                          002
ERRORS · DETECTED:
VIRTUAL MEMORY JSED: 3285 WORDS (13 PAGES)
DYNAMIC MEMORY: 3860 WORDS (14 PAGES)
ELAPSED TIME: 00:00:47
MRREST MRREST SP=C20,1]IM,C20,1]MRREST
```

MRREST- MACRO-M1110 27-MAR-80 15:13 PAGE-8-2-

```
MRBUG-
            MACRO-M1110 27-MAR-80 15:09 PAGE-5
                                                      Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
                                                                                .FITLE. MRBUG.
             000000
                                                                                HARDWARE-QUERY-RESOLVER-'MANUAL' DEBUGGING AIDS-MATCH-REPORT PROCESSOR TEST-ROUTINES-
                                                                                DEBUGGING COMMANDS
                                                                                COMMANDS:
         10
                                                                                AT
                                                                                             SET-BREAKPOINT
                                                                                ÖF
                                                                                            REMOVE BREAKPOINT SINGLE STEP
        12
                                                                                99
        1.3
                                                                                             PROCEED FROM BREAKPOINT
         15
                                                                               ONCE A COMMAND HAS BEEN EXECUTED (OR AN ERROR ENCOUNTERED) THIS MODULE RETURNS CONTROL TO THE MODULE MRP AT LOCATION
         17
                                                                                'MRPXX'.
         18
        20
21
22
                                                                     ******************
                                                                                DISCLAIMER:
                                                                               DISCLAIMER:
IN ORDER FOR THE BREAKPOINT ROUTINES TO WORK PROPERLY.
THERE MUST BE A PIPELINE REGISTER ONLY CLOCK, THIS
WOULD ALLOW THE CHANGING OF PLR CONTENTS WITHOUT CAUSING
AN INSTRUCTION TO BE EXECUTED, AS IT STANDS NOW, THE PIPE-
LINE REGISTER CLOCK IS TIED TO THE SEQUENCER CLOCK, WHEN
A BREAKPOINT HAS BEEN REACHED, ANY OPERATION INVOLVING
A PLR CLOCK (EG, PRINTING MICROPEM MEMORY) WILL EXECUTE
THE INSTRUCTION IN THE PLR. THE 2900 SEQUENCER STACK IS
ALSO SOMETIMES CHANGED.
        23
        25
        26
        27
28
        29
        30
31
        32
33
34
35
36
                                                                                .MCALL · CLEF$S,WTLO$S,RDAF$S,WTSE$S
        37
        39
                                                                                SET BREAKPOINT
        40
                                                                                EG. MR>AT-22
        41
        42
             000000
        43
             000000
                                                                                CALL
                                                                                                                                     :LOOK.FOR.BKPT.ADDRESS.IN.COMMAND.LINE
:OK. CONVERT.BKPT.ADDRESS.
                                                                                             FIND
        44
             000004
                           103004
                                                                                BCC
             000006
                                                                                             ERR4
                                                                                CALL
                                                                                                                                     : NOTHING - THERE -
        46
             000012
                           000167
                                        000000G
                                                                                JMP
                                                                                             MRPXX.
             000016
000022
                                                                                                                                     :CONVERT.BKPT.ADDRESS
:OK, CONTINUE.
:ERROR.ON.CONVERSION
        47
                                                                                             PACK
                           103004
        48
                                                                                BCC.
                                                                                             2$
             000024
                                                                                CALL
                                                                                             ERR5
                          000167
026767
             000030
                                        000000G
                                                                                JMP
                                                                                             MRPXX:
        51
             000034
                                        000000G · 000000G · 2$:
                                                                                CMP
                                                                                             MMHIGH, BIHWD.
                                                                                                                                     :IS ADDRESS IN RANGE
:YES, CONTINUE
:ADDR OUT OF RANGE
             000042
        52
                          003004
                                                                               BGT.
CALL
                                                                                             3$
        53
54
55
             000044
                                                                                             ERR10
             000050
                          000167
                                        000000G
                                                                                JMP
                                                                                             MRPXX.
                                                                                                                                   TOP WE WAS
        56
             000054
                          012746
                                       000400
                                                                  3$:
                                                                                MOV
                                                                                             #MBKCLKEN,-(SP)
                                                                                                            57
             000060
                                                                                CALL
                                                      Approved For Release 2005/07/12
```

```
MRBUG-
          MARO-M1110 27-MAR-80 15:09 PAGE-5-1
                                             Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
          000064
                                                                 MOV.
                                                                            BINWD,-(SP)
                                                                                                             ;LOAD-BKPT ADDR-INTO LOAD-BUS-REG:;LOAD-MRP-BKPT-REG:;SET-FLAG-FOR-BKPT SET-
                                000000G-
       59
           ийийи и
                                                                 CALL
                                                                            LBMRP
           000074
       60
                      052767
                                000000G - 000000G -
                                                                            #BREAK, BASE
                                                                 BIS.
                      000167
                                000000G
                                                                            MRPXX.
      62
63
64
                                                                 REMOVE · BREAKPOINT · (DISABLE)
MR>OF ·
       65
       66
67
       68
           000106
                                                      ÓF1::
       69
           000106
                                                                 CLR-
                                                                            -(SP)
                                                                                                             #SEND-0 TO MRP-CONTROL-REG
#EXECUTE-TRANSFER-
#CLEAR-CSR 2-
       70
           000110
                                                                 CALL
                                                                            MRPCR
           000114
                      005067
                                 176422
                                                                 CLR.
BIC.
                                                                            QR$CR2
       72
73
74
75
76
77
78
79
                      042767
                                 000000G 000000G
                                                                            #BREAK, BASE
                                                                                                             :CLEAR · BREAKPOINT · SET · FLAG
           000126
                      000167
                                 000000G
                                                                            MRPXX.
                                                                 SINGLE - STEP -
                                                                 EG. MR>SS
                                                                      MR>SS-22
       80
       81
           000132
                                                      SS1::
       82
           000132
                                                                                                             :LOOK FOR ADDR IN COMMAND LINE
:NONE THERE, USE CURRENT MAR
:CONVERT START ADDRESS
:OK, CONTINUE
                                                                 CALL
                                                                            FIND
       83
           000136
                      103426
                                                                 BCS:
                                                                            3$
       84
           000140
                                                                  CALL
                                                                            PACK
       85
           000144
                      103004
                                                                 BCC.
                                                                            1$
           000146
                                                                            ÉRR5
                                                                 CALL
                                                                                                             ; ERROR ON CONVERSION
       87
           000152
                      000167
                                000000G
                                                                            MRPXX.
       88
       89
           000156
                      026767
                                 000000G-000000G-1$:
                                                                 CMP
                                                                            MMHIGH, BINWD
                                                                                                             : IS - ADDRESS - IN - RANGE
       90
           000164
                      003004
                                                                                                             :YES, CONTINUE:
:OUT.OF.RANGE.HIGH
                                                                 BGT.
                                                                            2$
       91
92
           000166
                                                                 CALL
                                                                            ERR10
                      000167
                                000000G
           000172
                                                                  JMP .
                                                                            MRPXX
       94
                                                                 SEQUENCE: UP: TO: SINGLE: STEP: ADDRESS: (IF: NECESSARY) SET: SEARCH: MODE:
       95
       96
                                                                 SINGLE CLOCK ALL TO EXECUTE ONE INSTRUCTION
                                                                 SET-LOAD-MODE-
       98
                                                                                                             PROVIDE START ADDRESS FOR SEQUENCER
SEQUENCE ONLY UP TO START ADDRESS
REINHIBIT BRANCH CONTROL REG
       99
           000176
                     016746
                                000000G
                                                                 MOV-
                                                                            BINWD,-(SP)
      100
           000202
                                                                 CALL
                                                                            SEQMM.
      101
           000206
                      005046
                                                                 CLR.
                                                                             -(SP)
           000210
                                                                            MRPCR
                                                                 CALL
      103:000214
                                                      3$:
     104 000214
105 000220
                      012746
                                001777
                                                                 MOV-
                                                                                                             ;SET-CP-MICROCODE-TO INNOCUOUS LOC-(X:3FF:)
                                                                 CALL
CLR:
                                                                            SEQCS
      106
           000224
                      005046
                                                                             -(SP)
                                                                                                             REINHIBIT BR CONTROL REG .
      197
           000226
                                                                 CALL
      108
      109
           000232
                      012767
                                 100000
                                           176422
                                                                 MOV.
                                                                            #Q$SM,QR$CR2.
#<Q$MNC+Q$RNC>,-(SP)
                                                                                                             *SET*SEHRUH MODE

*CLEAR MRP AND PRS CO-COUCKS *

*CLE DRIVE & PULSE

*SET*SINGLE CLOCK ALL

*MOVE TO COOL
      110
          000240
                      012746
                                 146000
                                                                 MOV
                      052716
                                                                 BIS.
      111 000244
                                001001
                                                                            #<Q$LBD+Q$LBP>,(SP)
     112.000250
                     012746
                                100000
                                                                            #Q$MSP,-(SP)
     113 000254
                                            CALL CSR1 : MOVE · TO · CSR1 CLEAR · NOTHING · Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
                                                                 CALL
                                                                            CSR1
                      905046
     114 000260
```

```
MRBUG-
        MACRO M1110 27-MAR-80 15:09 PAGE 5-2
                                       Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
     115 000262 012746
                            146000
                                                          MOV-
                                                                    #<Q$MNC+Q$RNC>,-(SP)
                                                                                                 :SET·MRP·AND·PPS·NO+CLOCKS
:AND·REWRITE·CSR1
    116 000266
117
                                                          CALL
                                                                   CSR1
    118 000272 005067
                            176422
                                                          CLR:
                                                                   QR$CR2
                                                                                                 :SET-LOAD-MODE:
:PRINT-MICROPGM-ADDRESS
     119 000276
                                                          CALL
     120 000302
                   000167
                            000000G
                                                                   MRPXX
    124
122
     123
                                                          PROCEED.
     124
                                                          EG. MR>GO
     125
                                                               MR>G0 - 22
     127
     128-000306
     129
         000306
                                                                   FIND
                                                                                                 ;LOOK.FOR.START.ADDRESS
         000312
                   103431
                                                                   MGO -
                                                                                                #NONE, GO-FROM-PRESENT-ADDRESS
#CONVERT-START-ADDRESS-
#OK, CONTINUE-
     131
         000314
                                                          CALL
                                                                   PACK
    132 000320
133 000322
                   103004
                                                          BCC -
                                                                    1.5
                                                          CALL
                                                                   ERR5
                                                                                                 :ERROR ON CONVERSION
         000326
                   000167
                            000000G
     135
         000332
     136
                   026767
                            000000G-000000G-1$:
                                                          CMF.
                                                                   MMHIGH, BIHWD
                                                                                                :IS-START-ADDRESS-IN RANGE:
:YES, CONTINUE:
:OUT-OF-RANGE-HIGH-
     137
         000340
                   003004
                                                          BGT.
                                                                   2$
     138 000342
                                                                   ERR10
                                                          CALL
     139
         000346
                   000167
                            000000G
                                                          JMP
                                                                   MRPXX
     140
         000352
                   016746
                            000000G
                                                2$:
                                                          MOV.
                                                                   BĮNWD,-(SP)
                                                                                                :PROVIDE:START:ADDRESS:FOR:SEQUENCER:
:SEQUENCE:ONLY:UP:TO START:ADDRESS:
     142 - 000356
     143
     144 000362
                   005046
                                                          CLR:
                                                                   -(SP)
                                                                                                :REINHIBIT BRANCH CONTROL REG
     145
         000364
                                                         CALL
CLR·
                                                                   MRPCR
     146
         000370
                   005046
                                                                   -(SP)
     147
         000372
                                                          CALL
                                                                   LBMRP -
                                                                                                :SINGLE-CLOCK-TO-REINHIBIT, BRANCH-REGISTER-
     149
                                                          IF A BREAKPOINT IS IN EFFECT, BRANCH TO CODE THAT PREPARES
     150
                                                          TO FIELD IT. ELSE START FREE RUN WITHOUT BREAKPOINTS.
     151
     152 000376
                                                MGO:
         000376
                  012746 001777
                                                          MOV-
                                                                   #1777.-(SP)
                                                                                                ;SET-CP-MICROCODE-TO INNOCUOUS LOC-(X:3FF:)
    154 000402
                                                         CALL
CLR
                                                                   SEQCS:
         000406
000410
     155
                   005046
                                                                    -(SP)
                                                                                                ; REINHIBIT BR . CONTROL . REG
     156
     158
         000414
                   032767
                            000000G-000000G-
                                                                                                :PROCEED TO BREAKPOINT
:YES, SET UP FOR BKPT
:SET SEARCH MODE
:CLEAR MRP AND PPS NO-CLOCKS
:CLEAR DRIVE AND PULSE
                                                         BIT.
                                                                   #BREAK, BASE.
    159
         000422
                   001047
                                                         BHE
                                                                   MBK -
    160
        000424
                   012767
                            100000
                                      176422
                                                          MOV
                                                                   #Q$SM,QR$CR2
                            146000
    161
         000432
                   012746
                                                         MOV.
                                                                   #<Q$MNC+Q$RNC>,-(SP)
    162.000436
                   052716
                                                         BIS.
                                                                   #<Q$LBD+Q$LBP>,(SP)
-(SP)
    163 000442
164 000444
                   005046
                                                         CLR.
                                                                                                :SET-NOTHING-
                                                                                                :NEW-CSR1
    165
                                                         PROVIDE FOR INTERRUPT FROM TERMINAL TO RETURN CONTROL TO USER (IN CASE MICROCODE HANGS OR RUNS FOREVER).
    166
167
                                                                                           TOLER WOLLDWAY ENTRY CHE
    169 000450
                                                         CLEF$S: #EFN.4
                                                                                                :010 FOR UNSOLICITED INTERRUPT
    170
    171 000462
                                                         CALL:
                                                                   HANG2
```

```
MRBUG-
              0 M1110 27-MAR-80 15:09 PAGE 5-3
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     172 · 000466
173
                                                           WTSE$S . #EFN.4
                                                                                                   :WAIT-FOR-QIO-COMPLETION-(CHAR INTERRUPT)
     174
         000506
                                                                     KILL
-(SP)
                                                           CALL
                                                                                                   *KILL-010
                                                                                                   CLEAR NOTHING

SET MRP AND PPS NO CLOCKS

REWRITE CSRI

SEND 0 TO MRP CONTROL REG
         000504
                   005046
                                                           CLR.
     176
         000506
                   012746
                             146000
                                                                      #<Q$MNC+Q$RNC>,-(SP)
     177
         000512
                                                           CALL
                                                                     CSR1
     178
         000516
                   005046
                                                           OLR.
                                                                      -7901
                                                                                                   ;DO:IT:
:SET-LOAD MODE:
:PRINT-MICROPGM-ADDRESS:
         000520
                                                                     MRPCR
                                                           CALL
     180 000524
                   012767
                             000000
                                                           MOV-
                                                                     #0.QR$CR2
     181 000532
                                                           CALL
                                                                     MRPMP
     182 - 000536
                   000167
                             авававс
                                                                     MRPXX
     183
     184
     185
                                                           EXPECT. TO HIT A BREAKPOINT:
     186
187
         000542
                                                  MBK:
     188 000542
                                                           CLEF$S #EFN.3
                                                                                                   ;CLEAR BKPT EVENT FLAG
     189
                                                           CLEF$S: #EFN.4
                                                                                                   :CLEAR QIO EVENT FLAG
     191
     192
                                                           SET-BKPT-ALLOW-BIT-IN-MRP-CONTROL-REG-
                                                           SET SEARCH MODE:
SET SEARCH MODE:
SET-FREE RUN CLOCK:
WAIT-FOR-BKPT INTERRUPT-THROUGH-VECTOR-ADDRESS-274 (SEE-
RTN-1BPTISR1) OR-CHARACTER: INTERRUPT-FROM-TERMINAL:
     194
     195
     196
     197
     198 000566
                   012746
                             001000
                                                           MOV-
                                                                     #MBKALLOW,-(SP)
                                                                                                   ;SET-MRP-CHTL-WORD-
     199 000572
                                                                     MRPCR -
                                                           CALL
                                                                                                   ;DIRECT-CNTL-WORD-TO MRP-
;SET-SEARCH-MODE-
     200
         000576
                   012767
                             140000
                                       176422
                                                           MOV-
                                                                     #<Q$SM+Q$ENBK>,QR$CR2
     201 000604
                   012746
                             146999
                                                           MOV-
                                                                     #<Q$MNC+Q$RNC>,-(SP)
                                                                                                   CLEAR MRP AND PPS NO-CLOCKS
     202-000610
                   052716
                             001001
                                                                     #<Q$LBD+Q$LBP>.(SP)
-(SP)
                                                           BIS
                                                                                                   :CLEAR · DRIVE · AND · PULSE ·
     203 000614
                   005046
                                                           CLR-
                                                                                                   ;SET-NOTHING-
     204 000616
                                                                     CSR1
                                                                                                   NEW-CSR1
: ISSUE-QIO TO-TERMINAL
                                                           CALL
     205 000622
                                                                     HANG2 -
     206
     207
                                                           WAIT-FOR-INTERRUPT-FROM-TERMINAL OR-BREAKPOINT-INTERRUP,
     208
     209
     210 000626
211
212 000642
                                                           WTL0$S 0,#000014
                                                                                                   : WAIT-FOR-BKPT-OR-CHAR-INTERRUPT-
                                                                                                   :READ · FOR · DEBUGGING
                                                           RDAF$S . #EFBUF
     214
215
216
                                                           INTERRUPT RECEIVED
                                                           RESET-NO-CLOCKS-IN-CSR #1
                                                           SET-LOAD MUDE
                                                           PRINT MICROPGM ADDRESS
     218
     219 000654
                   005046
                                                                                                   CLEAR NOTHING
SET MRP AND PPS NO-CLOCKS
REWRITE CSR1
     220 000656
                   012746
                             146000
                                                           MOV.
                                                                     #<Q$MNC+Q$RNC>,-(SP)
     221
         000662
                                                                     CSR1
#0,-(SP)
                                                           CALL
     222.000666
223 000672
                                                                                                   SEND 0 TO MRP CONFRED REG
                             000000
                                                           MOV.
                                                                     MRPCR
     225 000676
                   012767
                             000000
                                       176422
                                                           MOV.
                                                                     #0,QR$CR2
                                                                                                   ;SET.LOAD.MODE.
;RE-ARM.INTERRUPTS
    226 000704 012767
                             001000
                                       176422
                                                           MOV.
                                                                     #Q$REBK,QR$CR2
     227 000712
                                                                                                   :PRINT MICROPGM ADDRESS
                                                           CALL
                                                                     MRPMP .
     228 000716
                                        Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
```

MRBUG- MACRO-M1110 27-MAR-80 15:09 PAGE 5-4 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3

229 000722 000167 000000G

JMP · MRPXX ·

5: 09 PAGE 6
Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3 MRBUG-0-Mł110 27-MAR-80 15:09 PAGE/6 231 232-233 234 235 000726 237 000726 237 000732-238 000732-249 000744-241 000750 242-000754 243 000764 243 000764 244 000764 245 246 PRINT MICROPROGRAM ADDRESS MRPMP: :READ-MM ADDRESS SELECT BIT:
:WRITE MRP CONTROL REGISTER:
:MOW GET WORD FROM MRP:
:COAD RI FOR CONVERSION:
:CLEAR UPPER 6 BITS:
:R5 -> PRINT LINE:
:CONVERT MPA:
:PRINT DN CONSOLE 012746 000100 MOV #MMADRD,-(SP) CALL MRPCR -CALL MOV-MRPLB (SP)+,R1 #177400,R1 042701 177400 BIC. 012705 000000G MOV. #PRINT, R5 CALL: CONSOL :PRINT-ON-CONSOLE RETURN 000001 .END

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MRBUG MACRO M1110 27-MAR-80 15:09 PAGE 6-1
SYMBOL TABLE
                                               Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
ALUCKE=-040000
                                   BYTE39= 0000047
                                                                     BYTE90= 000132
                                                                                                        MMADRD = . 000100
                                                                                                                                          Q$LHP·=·010000
Q$MNC·=·140000
ALU0E - = - 004000
                                   BYTE4 = 0000004
                                                                     BYTE91= 000133
                                                                                                       MMHIGH= · ***** GX · MMLEFT= · 000002 ·
AT1
          000000RG
                             002 · BYTE40 = · 000050
BYTE41 = · 000051
                                                                     BYTE92=-000134
                                                                                                                                           Q$MR = 000052
                                                                     BYTE93 = . 000135
                                                                                                        MMOE - - 000004
                                                                                                                                          Q$MRP - - 000040
BASE - ****** GX-
BINUD = ***** GX-
                                   BYTE42= 0000052
                                                                     BYTE94= 000136
                                                                                                        MMWRTE = . 000010
                                                                                                                                          Q$MRP2= 000240
Q$MSC = 04000
                                   BYTE43=-000053
                                                                     BYTE95= 000137
                                                                                                       MNOBRE = 100000
MREN1 = 000001
MREN2 = 020000
BITVAL = 000000
                                   BYTE44= 000054
                                                                     BYTE96= 000140
                                                                                                                                           Q$MSET= 000004
BIT0 = 000001
BIT1 = 000002
                                   BYTE45 - 000055
                                                                     BYTE97=-000141
                                                                                                                                          Q$MSP - = 100000
                                   BYTE46= 000055
BYTE47= 000057
                                                                     BYTE98= 000142
                                                                                                                                          0$NCLK= 176000
Q$PP = 000100
                                                                                                        MRPCR - = - ****** GX
BIT10 = 002000
                                                                     BYTE99 - 000143
                                                                                                        MRPLB = · ***** GX
BIT11 = 004000
BIT12 = 010000
                                   BYTE48= 0000060
                                                                     BYTVAL = 000144
CBKALL = 001000
                                                                                                                                    002 · Q$PPSW= · 000320
Q$PP2 · = · 000300
                                                                                                        MRPMP.
                                                                                                                 000726R
                                   BYTE49= 000061
                                                                                                        MRPXX: = : ***** GX
BIT13 = 020000
                                   BYTE5 = 000005
                                                                     CBKCLK = · 000400
                                                                                                       MSYN - 000040
                                                                                                                                          Q$QHLT= 000013
BIT14 = 040000
                                   BYTE50= 000062
BYTE51= 000063
                                                                     CNOBRE = 100000
                                                                                                                = 000144
                                                                                                        N.
                                                                                                                                          Q$QL
                                                                                                                                                  = 000043
BIT15 = 100000
                                                                     CONSOL= ******* GX
                                                                                                        OF 1
                                                                                                                002·Q$QLA·=·000053
BIT2 - - 000004
                                   BYTE52= 000064
                                                                     CPCCEN= 010000
CPCR = ******* GX
                                                                                                        PACK -
                                                                                                                                          Q$QLB = 000054
         = 000010
BIT3
                                   BYTE53= 000065
                                                                                                                                          Q$QLR:=:000001
Q$QW =:000042
                                                                                                       PLB.
                                                                                                                = 000010
         = 0000020
                                   BYTE54= 000066
BYTE55= 000067
                                                                     CFREAD = 040000
                                                                                                       PLC.
                                                                                                                = · 000020
= · 000030
BIT5
         = 000040
                                                                     CPWRTE = 020000
CSADRD = 000004
                                                                                                        PLD.
                                                                                                                                          0$RDCD= 000006;
0$RDMD= 000006;
- 001000 ;
BIT6
         = 000100
= 000200
                                   BYTE56 - 000070
                                                                                                        PLRWR - = - 000200
BIT?
                                   BYTE57 = . 000071
                                                                     CSEQCI = 100000
                                                                                                       PLR.EN= 000200
         = 000400
BITB
                                                                     CSOE - - 000040
CSR1 - ******** GX
                                   BYTE58= 000072
                                                                                                       PRINT -- ***** GX-
OR$CR1 -- 176420
                                                                                                                                          Q$RNC -- 006000
Q$RSC -- 004000
BIT9
                                   BYTE59= 000073
                                                                     UR$CR1=.176420

QR$CR2=.176422

QR$LBR=.176424

Q$ATTN=.000100

Q$BCL.=.000001

Q$CCCP=.000040
BREAK . = . ******** GX .
                                   BYTE6 = 000006
BYTE0 = 000000
BYTE1 = 000001
                                                                                                                                          Q$RSET= 000010
                                   BYTE60= 000074
BYTE61= 000075
                                                                     DBR.RD= 000001
                                                                                                                                          Q$SM = 1000010
Q$SP = 000120
                                                                     DB$CPP=-001457
DB$SPT=-000026
DB$TPC=-000023
                                                                                                                                          0$SP = 000120

0$SP2 = 000340

RGG:EN= 000200
BYTE10= 000012
BYTE11= 000013
                                   BYTE62= 000076
                                  BYTE63= 000077
BYTE64= 000100
BYTE12= 000014
                                                                     DISPGS= 100000
                                                                                                       Q$CHB - - 000400
                                                                                                                                          RGQ:VA= 020000
BYTE13= 000015
                                   BYTE65= 000101
                                                                     DMAAWR = 000005
DMARRD = 000003
                                                                                                       Q$CHRL= 000200
                                                                                                                                          SEOCS = ******** GX**
SEOMM = ******** GX**
BYTE14= 000016
                                  BYTE66= 000102
BYTE67= 000103
                                                                                                       Q$CLR.=.000040
Q$CNC.=.030000
Q$CP.=.000060
BYTE15= 000017
                                                                     DMARWR = . 000004
                                                                                                                                          SEQ.CI= 000010
BYTE16= 000020
                                   BYTE68 - 000104
BYTE69 - 000105
                                                                     EFBUF - ******** GX
                                                                                                                                          SSI
                                                                                                                                                     000132RG ....
                                                                                                                                                                      002
BYTE17= 000021
BYTE18= 000022
                                                                     EFN.3 = ********* GX
                                                                                                       Q$CPCC=-000010
                                                                                                                                          S$CLR·= 000000
S$LA = 000001
S$QB = 000005
                                                                     EFN.4 = ******* GX
ENBR = *010000
                                   BYTE7 = 000007
                                                                                                       Q$CP2.=.000260
Q$CSC.=.010000
BYTE19= 000023
                                  BYTE70 = 000106
BYTE71 = 000107
BYTE2 - - 000002
                                                                     ERR10 = ******* GX*
ERR4 = ****** GX*
ERR5 = ******* GX*
                                                                                                       Q$CSEL= 000360
                                                                                                                                                  = · 000006
= · 000004
                                                                                                                                          S≴QR
BYTE20=-000024
BYTE21=-000025
BYTE22=-000026
                                   BYTE72=-000110
                                                                                                       Q$CSET= 000002
                                                                                                                                          S$0X
                                   BYTE73=-000111
                                                                                                       Q$CSP·=·020000
Q$DMA·=·000001
                                                                                                                                          S$SR
                                                                                                                                                  = 000007
                                  BYTE74= 000112
BYTE75= 000113
                                                                     FIND
                                                                             = · ****** GX
                                                                                                                                                  = · 000010
= · 000014
BYTE23= 0000027
                                                                     G01
                                                                                000306RG
                                                                                                  002 · Q$ENBK = · 040000
                                                                                                                                          S$S2
BYTE24= 0000030
                                   BYTE76= 000114
                                                                     HANG2 -- ****** GX
                                                                                                       Q$ENOP = . 020000
                                                                                                                                          TD$CTR= 176370
TD$CTW= 176360
BYTE25=-000031
                                   BYTE77= 000115
                                                                     KILL: =: ***** GX
                                                                                                       Q$FAL·=·004000
Q$FC·=·000045
Q$FO·=·000044
BYTE26= 000032
                                  BYTE78= 000116
                                                                     LBMRP · = · ***** GX
                                                                                                                                          TD$INL = 004000
BYTE27= 000033
                                   BYTE79= 000117
                                                                     LOC.EN = 000100
LOC.WA = 040000
LOC.WB = 100000
MAREN1 = 000001
                                                                                                                                          TD$MEM= 000270
BYTE28=-000034
BYTE29=-000035
BYTE3 =-000003
                                  BYTE8 = 000010
                                                                                                                = 000046
                                                                                                                                                                            . To 3 8
                                                                                                                                          TD$0AR= 176344
TD$0TR= 176346
                                   BYTE80= 000120
                                                                                                       Q$HBF = 000002
Q$ICP = 000006
                                  BYTE81= 000121
                                                                                                                                          TD$QRD= 000274
BYTE30= 000036
                                  BYTE82= 900122
                                                                     MAREN2 = . 004000
                                                                                                       Q$IHB - - 000003
                                                                                                                                          TD$SW-=-176376
BYTE31= 000037
                                  BYTE83= 000123
                                                                     MARLOD= 010000
MAROUT= 000002
MAR.LO= 002000
                                                                                                       Q$IHRL= 000002
                                                                                                                                          TD$TAR= 176372
BYTE32=-000046
BYTE33=-000041
                                   BYTE84= 000124
                                                                                                       Q$IMRP= 000007
                                                                                                                                          TD$TAW= 176362
TD$TDR= 176374
                                  BYTE85=-000125
                                                                                                       Q$LBD -- 001000
                                                                                             Q$LBD = 001000
Q$LBDP = 001001
002 Q$LBP = 000001
Q$LDCD = 000003
Q$LDMD = 000004
002 Q$LDPP = 002000
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BYTE34= 000042
                                  BYTE86= .000126
                                                                     MAR.OU= 000040
                                                                                                                                           TD$TDW≕ 176364
BYTE35= 000043
                                  BYTE87 = . 000127
                                                                     MBK.
                                                                                000542R
BYTE36 = . 000044
                                                                                                                                                1000000 TO THE RESERVE OF THE SECOND
                                  BYTE88= 000130
                                                                     MBKALL = . 001000
BYTE37 = . 000045
                                  BYTE89= 000131
                                                                     MBKCLK = . 000400
                                                                                                                                                 BYTE38= 000046
                                  BYTE9 = 000011
                                                                               0003768
                                                                     MG0 -
                                                                                                                                          T$BSO·=·100000
                                               Approved For Release 2005/07/1
```

```
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                                              Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
TSBT- - - 0000020
                                 T$SEG1 = . 000000
                                                                   WORD26≃-000064
                                                                                                    WORD51=-000146
                                                                                                                                      WORD77=-000232
T$BTAR= 000030
                                  T$SEG2 = - 0000001
                                                                   WORD27=-000066
WORD28=-000070
                                                                                                    WORD52= 000150
                                                                                                                                      WORD78= 000234
T$BTD - = 002000
T$CD - = 000100
T$CLK - = 002000
                                  T$SEG3=-000002
                                                                                                    WORD53 = 000152
WORD54 = 000154
                                                                                                                                      WORD70- 000234
WORD79- 000236
WORD8 - 000020
                                  T$SO.
                                         = 0000001
                                                                   WORD29= 000072
                                  T$UBUS = 100000
                                                                   WORD3 = 000006
                                                                                                     WORD55= 000156
                                                                                                                                      WORD80 = 000240
WORD81 = 000242
                                                                   WORD30=-000006
WORD30=-000074
WORD31=-000076
1$DISK≃ 000200
                                  T$1CLK=-000400
                                                                                                    WORD56= 000160
T$DRD - = - 000004
                                  T$8BEN=:000020
                                                                                                    WORD57=-000162
                                                                                                                                       WORD82= 000244
T$EMEM= 010000
                                 UBD.IN=-000020
                                                                   WORD32= 000100
                                                                                                    WORD58= 999164
                                                                                                                                      WORD83= 000246
T$FSAA= : 000000
                                 UNPK - - ****** GX
                                                                   WCRD33= 000102
                                                                                                                                      WORD84= 000250
WORD85= 000252
                                                                                                    WORD59= 000166
T$FSAB= 000004
                                 WORD0 = 000000
WORD1 = 000002
                                                                   WORD34= 000104
WORD35= 000106
                                                                                                     WORD6 = 000014
7$FSAC=-000014
                                                                                                                                      WORD86= 000254
WORD87= 000256
                                                                                                    WORD60= 000170
T$FSB2=-000010
                                 WORD10= 000024
                                                                   WORD36= 000110
                                                                                                    WORD61=-000172
WORD62=-000174
T$IB: =:000026
                                 WORD11=-000026
                                                                   WCRD37=-000112
                                                                                                                                      WORD88= 000260
T$IBAR= 000024
                                 WORD12=-000030
WORD13=-000032
                                                                   WORD38= 000114
                                                                                                    WORD63= 000176
                                                                                                                                      WORD89 = 000262
WORD9 = 000022
T$IBE - = - 020000
T$IBF - = - 040000
                                                                   WORD39=-000116
WORD4 =-000010
                                                                                                     WORD64= 000200
                                  WORD14= 000034
                                                                                                                                      WURD9 = 000022
WORD90 = 000266
WORD91 = 000270
WORD93 = 000272
                                                                                                    WORD65= 000202
T$ICD - = - 000040
                                 WORD15= 000036
                                                                   WORD40= 000120
                                                                                                    WORD66=-000204
WORD67=-000206
T$MODE = . 004000
                                 WORD16= 000040
                                                                   WORD41=-000122
T$08 - - 000036
                                 WORD17=-000042
                                                                   WORD42= 000124
                                                                                                    WORD68= 000210
T$0BE · = · 004000
T$0BF · = · 010000
                                 WORD 18 = . 000044
                                                                   WORD43= 000126
                                                                                                                                    __WORD945 000274
__WORD95 000276
                                                                                                     WORD69=-000212
                                  WORD19= 000046
                                                                   WORD44= 000130
                                                                                                    WORD7 = 000016
WORD70= 000214
WORD71= 000216
T$0BRA= 000034
                                 WORD2 - = -000004
                                                                   WORD45= 000132
                                                                                                                                      .WORD96 = .000300
WORD97 = .000302
T$0BWA= .000032
                                 UORD20= ∙ 000050
                                                                   WORD46=-000134
WORD47=-000136
T$0UTA= 100000
T$RBD0= 000200
T$RNB = 000040
                                 WORD21 = . 000052
                                                                                                    WORD72= 000220
                                                                                                                                      WORD98= 000304
                                 WORD22= 0000054
                                                                   WORD48 = 000140
                                                                                                    WORD73 = 000222
WORD74 = 000224
                                                                                                                                      WORD99 = 000306
                                 WORD23= 000056
WORD24= 000060
                                                                   WORD49= 000142
                                                                                                                                      WRDVAL = 000310
XTREAD = 001000
T$RSET=:040000
T$SC:=:000022
                                                                   WORD5 - 000012
                                                                                                     WORD75= 000226
                                  WORD25-000062
                                                                   WORD50= 000144
                                                                                                    WORD76=-000230
                                                                                                                                      XTURTE = 000400
T$SCLK=-020000
. ABS.
           000000
                          000
           000000
                          001
MRBUG -
           000766
                          002
ERRORS · DETECTED :
VIRTUAL·MEMORY·JSED: 3584 WORDS· (·14 PAGES)
DYNAMIC·MEMORY: 4916 WORDS· ( 18 PAGES)
ELAPSED·TIME: 00:00:48
MRBUG, MRBUG/-SP=C20,13IM,C20,13MRBUG
```

2345 678 PARSE THE COMMAND LINE AND TRANSFER CONTROL TO ONE OF THE CP SUB-MODULES OR BACK TO QMAIN; CONTROL COULD HAVE BEEN PASSED TO CP IN ONE OF THREE WAYS:

1. FROM QMAIN IF CP WAS SELECTED AS THE FIRST PROCESSOR UPON ENTRY TO THE PROGRAM 12 i3 >CP+LD+CD 0

2. FROM OMAIN IF-CP-WAS-SELECTED FROM ONE-OF-QMAIN'S OTHER-SUB-MODULES-MR>CP-LD+CD+0 i5 16 17 3. ON RETURN FROM ONE OF CP'S SUB-MODULES CP>LD CD A 19 20 CP PARSES AT THE SECOND LEVEL OF CONTROL (SEE NOTES ATOMAIN ON LEVELS OF CONTROL). IN THE EXAMPLES ABOVE, CP WOULD PARSE 'LD' AND TRANSFER CONTROL TO THE CP SUBMODULE CPLD. IF CP SHOULD ENCOUNTER A STRING WHICH IS NOT A VALID COMMAND MEMONIC, CP CONSIDERS THE STRING TO BE A PROCESSOR MNEMONIC AND RETURNS CONTROL TO QMAIN. EG: CP SMP. D. MM. A 21 22 23 24

CP>MR · LD · MM · Ø

GP SUB-MODULES:

LOAD MEMORIES

DEBUGGING COMMANDS

OP_D.

CPPR

CPREST-CPBUG1 CPBUG2 -

.TITLE GR... .PSECT CP .LIST MEB

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THE STRING 'MR' IS NOT A VALID CP (SECOND LEVEL) COMMAND. CP RETURNS CONTROL TO QMAIN WHICH IN TURN WILL TRANSFER CONTROL TO ITS SUB-MODULE MRP.

PRINT MEMORY CONTENTS REMAINING COMMANDS (EXCEPT DEBUGGING COMMANDS)
DEBUGGING COMMANDS

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000000

25 26 27

```
CP----- MACRO: M1110 27-MAR-80 14:40 PAGE-6
                                      Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
     39
     40
     41
42
43
                                                        TABLE OF CP COMMAND MNEMONICS AND THEIR ASSOCIATED ROUTINE
                                                        ADDRESSES -
     44
         000000
000000
     45
46
                                               CPTBL:
                      181
                                124
                                                         .ASCII
                                                                                     :SET-BREAKPOINT-
     47
         0000002
                  000000G
                                                                 AT2 ·
                                                         .WORD
     48
         000004
                                106
                                                         .ASCII
                                                                                    ;DISABLE BREAKPOINT
     49
50
         000006
                   000000G
                                                         .WORD
         ийийи и
                                122
                      114
                                                         .ASCII
                                                                                     :LOAD-ALL-REGISTERS
     51
         000012
                   000000G
                                                         . MORD
     52
53
54
                                                                                    PRINT REGISTERS
         000014
                                107
                                                         .ASCII:
         000016
000020
                   000000G
                                                         .WORD
                      129
                                103
                                                         .ASCII
                                                                                     :SINGLE-STEP-A-NUMBER-OF-TIMES-(PROCEED)
         000022
                   000000G
                                                         .WORD
     56
57
         000024
                                123
                                                         .ASCII
                                                                                    :SINGLE STEP
         000026
000030
                   000000G
                                                         .WORD
      58
                                117
                      107
                                                         .ASCII
                                                                  /G0/
                                                                                     ;PROCEED FROM BREAKPOINT
                   000000G
         000032
                                                         . MORD
         000034
                      106
                                122
                                                         .ASCII
                                                                  /FR/
                                                                                    : RUN - BOTH - MRP - AND - CP
                   000000G
     61
         000036
                                                         .WORD
     62
63
                                124
         000040
                      123
                                                         .ASCII
                                                                                     :STORE · INTO · A · REG
                   000000G
         000042
                                                         .WORD
                                                                  ST2
         000044
                      122
     64
                                105
                                                                  ZRE Z
                                                                                     :READ - FROM - A - REG
      65
         000046
                   600000G
                                                         .WORD
     66
67
         000050
000052
                      114
                                104
                                                         .ASCII
                                                                                     :LOAD · MEMORY ·
                   000000G
                                                         .WORD
      68
         000054
                       120
                                122
                                                                                    .PRINT FROM MEMORY
                                                                  ZPRZ
         000056
                   000000G
                                                         .WORD
                                                                  PR2
      70
         000060
                      120
                                102
                                                         .ASCII
                                                                                     : PRINT BUFFERS
         000062
                   000000G
      71
72
73
74
75
                                                         .WORD
         000064
                                                         .ASCII
                                123
                                                                  ZRSz
         000066
                   000000G
                                                         .WORD
                                                                  RS2
                                114
         000070
                      193
                                                         .ASCII
                                                                                     :CALL HQR LOADER
                   000000G
         000072
                                                         .WORD
                                                                  CL2
                   000017
                                               CPNUM
                                                                  <.-CPTBL>/4
```

```
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78
79
                                                       {\tt INDEX-WORD\cdot FOR\cdot READING\ AND\cdot WRITING\cdot CP\cdot REGISTER\vec{S}}
80
    000074
              000000
                                             INDEX:: .WORD
81
82
83
                                                       BCL
84
85
    000076
                                             BCL::
    000076
               000200
                                                       .WORD
                                                                 128.
                                                                                     :BUFFERS ARE 128 WORDS :HIT-LIST-BUFFER
87
    000100
000102
              000130'
                                                       .WORD
                                                                 HLB
88
                                                        .WORD
                                                                 0
    000104
               000000
                                                        .WORD
90
    000106
               000000
                                                        .WORD
 91
    000110
               000530
                                                        .WORD
                                                                 HRL.
                                                                                     :HRL.BUFFER.
    000112
               000000
                                                       .WORD
                                                                 Й
                                                                                         3/2 Market 1 1 1 2 2 2 3 4
93
    000114
               000000
                                                                 Ø
94 000116
               000000
                                                       .WORD
 95
    000120
                                                        .BLKW-
                                                                                     :END · OF · BUFFER · ADDRESSES
 97
98
                                                       HIT-LIST-AND HRL-BUFFERS-
 99
    000130
                                             HLB::
100
    000130
                                                       .BLKW-
                                                                 128.
101
    000530
                                             HRL::
102-000530
               000001
                                                       .WORD
                                                                 000001
                                                                                     :=X:00011
103
    000532
              021042
                                                                                     ;=X'2222'
;=X'3334'
;=X'0101'
                                                       .WORD
                                                                 021042
104
    000534
               031464
                                                       .WORD
                                                                 031464
185
    000536
               000401
                                                                 000401
                                                       .WORD
106
    000540
               000004
                                                       .WORD
                                                                 000004
052525
063146
                                                                                     ;=X100041
;=X155551
;=X166661
    000542
000544
108
               052525
                                                       .WORD
109
               063146
                                                       .WORD
    000546
110
              000402
                                                       .WORD
                                                                 000402
                                                                                     :=X101021
111
    000550
               000002
                                                       .WORD
                                                                 000002
                                                                                     :=X:00021
    000552
000554
113
               000007
                                                       .WORD
                                                                 000007
                                                                                     :=X100071
114
               104210
114631
                                                       .WORD
                                                                 104210
                                                                                     ;=X188881
    000556
                                                       .WORD
                                                                 114631
000403
                                                                                     ;=X199991
    000560
               000403
                                                                                     ;=X:0103'
                                                                                     ;=X:0302
    000562
              001402
                                                       .WORD
                                                                 001402
119
    000564
               000012
                                                                 000012
                                                       .WORD
                                                                                     :=X:0000
    000566
               135673
146314
120
                                                       .WORD
                                                                 135673
                                                                                     ; =X' BBBB
                                                                                                                    , 43.<sup>44</sup> ,
121
    000570
                                                                                     :=X°CCCC°
:=X°0101°
                                                        .WORD
                                                                 146314
    000572
               000401
                                                       . MORD
                                                                 000401
123 000574
               140000
                                                       .WORD
                                                                 140000
                                                                                     :=X100001.5
124
    000576
                                                       .BLKW
.LIST
                                                                 128.-<.-HRL/2>
                                                       .NLIST
                                                                 CND.
```

CP----

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CP-----MACRO-M1110 27-MAR-80 14:40 PAGE-8
                                       Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
     128
     129
     130
                                                         OP ROUTINES.
    131
132
         001130
     133
                                                CP::
     134
         001130
                   004767
                                                                  PC.FIND
                                                                                      :LOCATE · THE · COMMAND · IN · THE · COMMAND · L INE
         001134
001136
     135
                   103003
                                                         BCC
                                                                   1$
                                                                                      OK, CONTINUE
     136
                                                                  PC.ERR3
                   004767
                            000000G
                                                         JSR
         001142
     137
                   000422
                                                         BR
                                                                   CPXX
     138
         001144
                   022700
                            000002
                                                                   #2,R0
                                                                                      :COMMANDS ARE 2 CHARS
         001150
001152
     139
                   001403
                                                         BEQ
                                                                   2$
     140
                   884767
                            000000G
                                                         JSR
                                                                  PC, ERR8 4
     141
         001156
                   000414
                                                         BR
                                                                  CPXX
                                                                                      :TRY-AGAIN
     142
     143
         001160
                   012700
                                                                  #CPNUM,R0
                            000017
                                                         MOM
                                                                                      :R0 = NUMBER OF COMMANDS:
:R2--> TABLE OF COMMAND MNEMONICS:
     144
         001164
                   012702
                            0000000
                                                         MOV.
                                                                   #CPTBL,R2
     145
         001170
                   004767
                                                         JSR
BCC
                                                                                      FIND MATCH IN TABLE

OKS CONTINUE

COMMAND NOT IN TABLE
                            000000G
                                                                  PC.SCAN-
     146
         001174
                   103003
                                                                  3$
     147
         00117E
                   004767
                                                         JSR
                                                                  PC.ERR12
     148
         001202
                   000402
                                                                  CPXX
                                                                                      :TRY-AGAIN-
     149
     150
                                                         JUMP - TO - THE - ROUTINE - THAT - GOVERNS THE - COMMAND
     152.001204 000171
                                                                   @(R1)
     153
                                                         LOCAL CP LOOP. INCLUDE PROMPILEDRICE COMMAND.
     155
     156
         001210
                                                CPXX::
     159
         001210
                   012767
                                                                  #*CP.GCMBLK+G.DPRM+2:;MOVE:CP:NAME TO:GCM:BLOCK:
PC.GCONLY: ;PROMPT:
PC.FIND: ;LOCATE:THE:COMMAND:IN:THE:COMMAND:LINE:
                            050103
                                      000000C
                                                         MOV
     160
         001216
001222
                   004767
                            000000G
                                                         JSR
     161
                   004767
                            000000G
                                                         JSR
         001226
                   103003
                                                         BCC
                                                                   1 $
                                                                                      OK, CONTINUE
         001230
001234
001236
     163
                   004767
                            000000G
                                                         JSR
                                                                   PC, ERR3
     164
                   000765
                                                         BR
                   022700
     165
                            000002:
                                                         CMP
                                                                                      :COMMANDS-ARE-2-CHARS
                                                1$:
                                                                   #2,R0
         001242
                   001403
                                                         BEQ
                                                                   2$
     167
         001244
                   004767
                            000000G
                                                         JSR
                                                                   PC.ERR0
                                                                                      TRY AGAIN
     168
         001250
                   000757
     169
     170
         001252
                   012700
                                                                                          - NUMBER OF COMMANDS
                                                         MOV.
                                                                   #CPHUM, RØ
                            000017
     171
         001256
                   012702
                            000000'
                                                         MOV
                                                                   #CPTBL,R2
                                                                                      :R2.-> TABLE.OF.COMMAND.MNEMONICS
     172
         001262
                   004767
                             000000G
                                                         JSR
                                                                   PC.SCAN
                                                                                      FIND MATCH IN TABLE
     173
         001266
                   103005
                                                         BCC
                                                                                      OK, CONTINUE
         001270
                   042767
                             000000G-000000G
                                                                   #BREAK, BASE
                                                                                      CLEAR BREAKPOINT FLAG:
RETURN TO QMAIN, LOOK FOR PROCESSOR MNEMONIC.
                                                         BIC
     175
         001276
                   000167
                             000000G
                                                         JMP
                                                                   COMXX:
     176
     177
                                                         JUMP . TO . THE . ROUTINE . THAT . GOVERNS THE . COMMAND
     179 001302 000171 000000
                                                3$:
                                                         JMP
                                                                   @(R1)
```

中心機構物於於於此為實際第二

CP-------MACRO-M1110 - 27-MAR-80 14:40 PAGE 10 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3 200 201 202-203 204 205 206 207 208 209 210 211 212-213 214 215 216 217 218 001310 220 221 TEMPORARILY DELETED ************ PRINT-CP-REGISTERS-UPON ENTRY: R0 = REGISTER TO BE READ UPON·EXIT: R1 = REGISTER·VALUE : REREG:: 000207 RTS: PC 000001 .END

The same of the sa . SYMBOL TA Q\$LDPP= 002000 Q\$LHP = 010000 ALTICKE = : 040000 BYTE39= 0000047 BYTE90 = . 000132 -MAROUT= 0000002 ALU0E = 004000 AT2 = ******* GX* MAR.LO=.002000 MAR.OU=.000040 BYTE4 = 000004 BYTE91= 000133 BYTE40= 000050 BYTE92 = . 000134 Q\$MNC ·= · 140000 Q\$MR = 000052 Q\$MRP = 000040 AØ 1 = 010000 BYTE41=-000051 BYTE93= 000135 MBKALL= :001000 = · ***** 3X BYTE42= 000052 BYTE94= 000136 MBKCLK= 000400 MMADRD= 000100 BASE Q\$MRP2= 000240 Q\$MSC = 040000 000076KG 002 · BYTE43 = · 000053 BYTE95= 000137 BCL -BYTE96= 000140 BYTE97= 000141 BITVAL = . 000000 BYTE44= 0000054 MMLEFT= 0000002 BYTE45=-000055 BYTE46=-000056 BYTE47=-000057 Q\$MSET= 000004 Q\$MSP = 100000 = · 000001 = · 000002 BITO MMOE - - 000004 MMURTE - 000010 MNOBRE - 100001 MREN1 - 000011 MREN2 - 020000 MSYN - 000040 BYTE98= 000142 BITi BYTE99= 000143 Q\$NCLK= 176000 Q\$PP = 000100 Q\$PPSW= 000320 Q\$PP2 = 000300 = 002000 BITIO BIT11 = 004000 BYTE48= 000060 BYTVAL = . 000144 BIT12 - 010000 BIT13 - 020000 BYTE49 = 000061 BYTE5 = 000005 CBKALL = 001000 CBKCLK = 000400 CL2 = ********* GX BIT14 = 040000 BYTE50=-000062 = 000144 Q\$QHLT= · 000013 Ν. Q\$QL = 000043 Q\$QLA = 000053 Q\$QLB = 000054 BIT15 = 100000 BYTE51 = . 000063 CHOBRE = 100000 OF2 = · жжжжжж GX · BIT2 - = 0000004 BYTE52=-000064 BYTE53=-000065 COMXX = · ********* GX CP 991130PG PB2+ 001130RG BIT3 = 000010 002 PC2 CPCCEN = 010000 CPNUM = 000017 Q\$QLR - - 000001 Q\$QW = 000042 -- 000020 BYTE54= 0000066 PLB. - 000010 BIT4 BYTE55=-000067 BYTE56=-000070 BYTE57=-000071 = · 000020 = · 000030 = 000040 BIT5 = .000100 Q\$RDCD= 000005 Q\$RDMD= 000006 BIT6 CPREAD=-040000 PLD: 002 · PLRWR · = · 000200 BITZ = . 000200 CPTBL 000000R = · 000400 = · 001000 BYTE58=-000072-BYTE59=-000073 BYTE6 =-000006 Q\$RBHB--001000 Q\$RBK--001000 Q\$RNC---006000 Q\$RSC---004000 CPWRTE = . 020000 PLR.EN= 000200 002 PR2 PR2 - ********* GX-QR\$CR1 - 176420 BIT9 CPXX. 001210RG BREAK - - · ******* GX · CSADRD = 000004 CSEQCI = 100000 CSOE - = 000040 BYTE0 = 0000000 BYTE60= 000074 QR\$CR2= 176422 Q\$RSET= 000010 BYTE1 = 000001 BYTE10= 000012 BYTE11= 000013 BYTE61=-000075 BYTE62=-000076 BYTE63=-000077 QR\$LBR= . 176424 Q\$SM = 100000 O\$SP = 000120 CSWRTE = . 000100 DBR.RD = . 000001 Q\$ATTH= 000100 Q\$BCL - = .000001 Q\$CCCP = .000040 Q\$SP2·=·000340 REREG· 001310RG BYTE12= 000014 BYTE64= 000100 DB\$CPP=.001457 8YTE13= 000015 BYTE65=-000101 DB\$SPT=:000026 Q\$CHB - = -000400 = жжжжжж GX RGQ.EN= 000200 Q\$CHRL=.000200 Q\$CLR.=.000040 3YTE14= 0000016 BYTE66=-000102 DB\$TPC=-000023 BYTE15=-000017 BYTE67= 000103 RGQ.VA= 020000 RG2 = ******** GX-RS2 = ******** GX-DISPGS = 100000 Q\$CNC -- 030000 Q\$CP -- 000060 BYTE16=:000020 BYTE68=-000104 DMAAUR = - 000005 BYTE69= 000105 BYTE17= .000021 DMARRD= .000003 Q\$CPCC=-000010 Q\$CP2-=-000260 Q\$CSC-=-010000 = · xotokotok._GX; BYTE18= 000022 BYTE7 = 0000007 DMARWR = . 000004 SCAN BYTE19= 000023 BYTE2 = 000002 BYTE70= 000106 ENBR. = 010000 ERR12 = : ******** GX-ERR3 = : ******* GX-BYTE71= 000107 BYTE72= 000110 Q\$CSEL=-000360 BYTE20= 0000024 ERR8 = ********* GX* FIND = ********* GX* FR2 = ******** GX* Q\$CSET= 0000002 Q\$CSP = 020000 S\$CLR = 000000 S\$LA = 000001 S\$QB = 000005 BYTE21 = 000025 BYTE73= 000111 BYTE74= 000112 BYTE22=:000026 BYTE23= 0000027 BYTE75= 000113 Q\$DMA · = · 000001 = 000005 = 000006 = 000004 = 000007 = 000010 GCMBLK = ******* GX-GCONLY = ****** GX-GO2 * * ****** GX-BYTE24= 000030 BYTE76= 000114 BYTE77= 000115 Q\$ENBK = . 040000 S\$QR Q\$ENOP - 020000 Q\$FAL - 004000 Q\$FC - 000045 002 Q\$FC - 000044 002 Q\$FC - 000044 BYTE25= 000031 S\$QX S\$SR BYTE78= 000116 BYTE26= 000032 BYTE79= 000117 BYTE8 = 000010 BYTE80= 000120 BYTE27 = 000033 5\$51 G:DPRM= - Hototototok GX = 000014 BYTE28= 000034 HLB. 000130RG 000530RG 9\$92 TD\$CTR= · 176370 BYTE29= 0000035 BYTE3 = 000003 HR: 000074RG 002 Q\$HBF = 000002 002 Q\$ICP = 000006 0\$IHB = 000003 BYTE81= 000121 INDEX-TD\$CTW= 176360 INDEX: 000074RG: LDREG: 001306RG: LD2: =: ***** GX BYTE82= 000122 BYTE83= 000123 TD\$INL = . 004000 TD\$MEM = . 000270 BYTE30= 0000036 LD2 - ******* LOC:EN= 000100 BYTE31 = - 000037 BYTE32= 000040 BYTE84= 000124 Q\$IHRL= 000002 TD\$0AR= 176344 LOC:WA=.040000 LOC:WB=.100000 LR2. =.****** BYTE33= 000041 BYTE85= 000125 BYTE86= 000126 Q\$IMRP=-000007 Q\$LBD---001000 TD\$0TR= 176346 TD\$GRD #000274 TD\$SW = 176376 BYTE34= 000042 LR2: = : 100000 LR2: = : ******* GX MAREN1=: 000001 MAREN2=: 004000 MARLOD=: 010000 BYTE35= 000043 BYTE87 = 000127 Q\$LBDP=-001001 Q\$LBP - - 000001 Q\$LDCD - 000003 TD\$TAR= 176372 BYTE36= 000044 BYTE37= 000045 BYTE88=-000130 TD\$TAW≃ · 176362 BYTE89=:000131 Q\$LDMD= 0000004 BYTE38= 000046 BYTE9 = 000011 TD\$TDR= 176374 Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3

```
SYMBOL - TABLE -
                             T$RBD0=-000200
                                                          WORD23=-000056
                                                                                      WORD5 = 000012
WORD50 = 000144
                                                                                                                   WORD76=-000230
WORD77=-000232
TD$TDW= 176364
T$AD -- 000020
T$BA -- 000002
                                                          LIORD24= : 000060
                             T$RNB - 000040
                             T$RSET= 040000
                                                                                      WORD51=-000146
                                                          WORD25= 0000062
                                                                                                                   WORD78= 000234
T$BD - - 000010
                             T$SC+
                                   = 0000022
                                                          WORD26=-000064
                                                                                      WORD52=-000150
                                                                                                                   WORD79= 000236
T$BSO - = - 100000
                             T$SCLK=-020000
                                                          WCRD27=-000066
                                                                                      WORD53= 000152
                                                                                                                   WORD8 = 0000020
                                                          WORD28- 000070
                                                                                                                   WORD80 = 000240,
WORD81 = 000242
T$8T - 000020
                             T$SEG!=-000000
T$SEG2=-000001
                                                                                      MORD54= 000154
                                                          WORD29= 0000072
                                                                                      WORD55 = 000156
T$BTAR=:000030
T$BTD = 002000
T$CD = 000100
T$CLK = 002000
                                                                                      WORD56=-000160
                                                                                                                   WORD82= 000244
                             T$SEG3=-000002
                                                          WORD3 = 000006
                             T$SO - - 000001
                                                          WORD30= 000074
                                                                                      WORD57 = - 000162 -
                                                                                                                   WORD83= 000246
                             T$UBUS= 100000
T$1CLK= 000400
                                                          WORD31=-000076
                                                                                      MORD58=:000164
                                                                                                                   MORD84= 000250
                                                                                      WORD59= 000166
                                                                                                                   WORD85= 000252
                                                          WORD32= 000100
T$DISK= 000200
T$DRD = 000004
                             T$8BEN= 000020
                                                          WORD33=-000102
                                                                                      WORD6 = 000014
                                                                                                                   WORD86=-000254
T$EMEM= . 010000
                             UBD: IN= 0000020
                                                          WORD34= 000104
                                                                                      WORD60= 000170
                                                                                                                   WORD87= 000256
                             WORD0 = 000000
WORD1 = 000002
                                                                                      WORD61=-000172
WORD62=-000174
                                                                                                                   WORD88 = . 000260
T$FSAA= 0000000
T$FSAB= 0000004
                                                          WORD35 = . 000106
                                                          WORD36= 000110
                                                                                                                   WORD89= 000262
T$FSAC= .000014
                             WORD10= 0000024
                                                          WORD37= 000112
                                                                                       WORD63=.000176
                                                                                                                   WORD9 = 0000022
T$FSB2=-000010
T$IB--000026
                             WORD11= 000026
WORD12= 000030
                                                          WORD38=-000114
                                                                                      WORD64=.000200
                                                                                                                   LIORD98 = - 000264
                                                                                                                   WORD91= 000266
                                                          WORD39 = 000116
                                                                                      MORD65=:000202
                             WORD13= 000032
                                                          WORD4 = 000010
                                                                                       WORD66= 000204
                                                                                                                   WORD92 = . 000270...
T$IBAR = . 000024
                                                                                                                   WORD93= 000274
WORD94= 000274
WORD95= 000276
WORD96= 000300
T$IBE -= 020000
T$IBF -= 040000
                             WORD14= 000034
                                                          WORD40= 000120
                                                                                      WORD67= 000206
                                                          MORD41 = 000122
                                                                                      LIORD68 = . 000210
                             WORD15 = . 000036
                                                          WORD42= 000124
                                                                                       WORD69= 000212
                             WORD16= 0000040
T$ICD - = - 000040
                             WORD17=-000042
                                                          WORD43= 000126
                                                                                       WORD7 = 000016
T$MODE = . 004000
T$08. = 000036
T$08E. = 004000
T$08F. = 010000
                                                          WORD44= 000130
                                                                                                                   WORD97 = 000302.
WORD98 = 000304
                             WORD18= 000044
                                                                                       WORD70=-000214
                             WORD19= 0000046
                                                          WORD45= 000132
                                                                                       WORD71= 000216
                                                                                                                   WORD99= 0003064.
                                                          WORD46= 000134
                                                                                      WORD72=-000220
                             UORD2 · = · 000004
                                                          WORD47 = · 000136
                                                                                       WORD73 = . 000222
                                                                                                                   WRDVAL = . 000310
T$0BRA= 000034
                             WORD20= 000050
T$0BWA= .000032
                             WORD21=-000052
                                                          WORD48 = . 000140
                                                                                       WORD74= 000224
                                                                                                                   XTREAD= 001000
                                                                                                                   XTWRTE = . 000400
T$0UTA= 100000
                             WORD22= 000054
                                                          WORD49= 000142
                                                                                       WORD75=-000226
 . ABS.
         000000
                       000
          000000
                       001
```

001312

DYNAMIC MEMORY: 3860 WC ELAPSED TIME: 00:00:42

CPxGPx+SP=020,13IMx020,13CP

ERRORS DETECTED:

002

VIRTUAL MEMORY USED: 3201 WORDS: (13 PAGES)

3860 WORDS: (14 PAGES)

```
CPBUG1 - MACRO Milio 27-MAR-80 14.41 PAGE 5 Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
```

```
.∓ITLE.GPBUG1
.PSECT.CPBUG1
    000000
 234567
                                                                   CONTROL PROCESSOR TEST ROUTINES.
 8
                                                                   COMMANDS:
                                                                                SET-BREAKPOINT
                                                                                REMOVE BREAKPOINT LOAD MICROPROCESSOR REGISTERS PRINT MICROPROCESSOR REGISTERS
10
                                                                   0F
                                                                   LR
                                                                    RG
                                                                                SINGLE-STEP-A-NUMBER-OF-TIMES-
SINGLE-STEP-
13
14
15
16
17
                                                          ************
18
                                                                    DISCLAIMER:
                                                                   DISCLAIMER:
IN ORDER FOR THE BREAKPOINT ROUTINES TO WORK PROPERLY
THERE MUST BE A 'PIPELINE REGISTER ONLY CLOCK, THIS
WOULD ALLOW THE CHANGING OF PLR CONTENTS WITHOUT CAUSING AN INSTRUCTION TO BE EXECUTED, AS IT STANDS NOW, THE PIPELINE REGISTER CLOCK IS TIED TO THE SEQUENCER CLOCK, WHEN A BREAKPOINT HAS BEEN REACHED, ANY OPERATION INVOLVING A PLR CLOCK (EG, PRINTING MICROPEM MEMORY) WILL EXECUTE THE INSTRUCTION IN THE PLR, THE 2900 SEQUENCER STACK IS ALSO SOMETIMES CHANGED.
19
21
22
23
24
25
26
27
                                                                    ALSO SOMETIMES CHANGED.
29
                                                          ******
30
31
    000000
                 000000
                                                       SSCNT: . WORD
                                                                                                                      :NUMBER OF TIMES TO SINGLE STEP
     000002
                 000000
                                                                                                                       ; WHERE · TO · START · SINGLE · STEPPING
33
34
35
36
37
38
                                                                    DEBUGGING ROUTINES
                                                                    SET-BREAKPOINT.
                                                                    EG. CP>AT-22
39
     000004
                                                       AT2::
                                                                                                                      ;LOOK:FOR:BKPT:ADDR:IN:COMMAND LINE:
;OK; CONVERT:BKPT:ADDRESS:
;NOTHING:THERE:
     000004
                                                                    CALL
                                                                                 FIND
41
     000010
                  103004
                                                                    BCC
                                                                                 1$
                                                                    CALL
                                                                                ERR4
     000012
42
     000016
43
                 000167
                              000000G
                                                                    JMP
                                                                                 CPXX
                                                                                                                      CONVERT BKPT ADDRESS
OK, CONTINUE
ERROR ON CONVERSION
     000022
                                                                                 PACK
    000026
45
                  103004
                                                                    BCC.
                                                                                 2$
                                                                                 ERR5
                                                                    CALL
46
                              1000000GFTT 11\411
47
     000034
                 000167
     000040
                  026767
                              000000G-000000G-2$:
                                                                                 CSHIGH, BINWD.
                                                                                                                      ; IS-START-ADDRESS-IN RANGE
                                                                                                                      :YES, CONTINUE:
49
     000046
                 003004
                                                                    BGT.
                                                                                 3年
                                                                                 ERR10
5й
     000050
                                                                    CALL
     000054
                 000167
                              000000G
                                                                                                                       SET-CP-CNTL-FOR BREAKPOINT
53
    000060
000064
                                                                                 #<CBKCLKEN>,-(SP)
                 R12746
                              000400
                                                       35:
                                                                    MGM
                                                                                                                                                       LOAD BUS REG
                                                                    CALL
                                                                                 CPCR
54
55
     000070
                              000000G
                                                                    MOV.
                                                                                 BINWD,-(SP)
                                                                                                                       :SET-BCE-CNTL-WORD
:SET-FLAG-FOR-BKPT
                                                                    CALL
BIS:
56
     000074
                                                                                 LBCP
                              000000G · 000000G
                                                                                                                                            BKPT SET
                 052767
     0320100
                                            Approved For Release 2005/07/12
                                                                                               IA-RDP85-00514R000200020001-3
```

```
0 M1110 27-MAR-80 14:41 PAGE 5-1 Release 2005/07/1 CIA-RDP85-00514R000200020001-3
                000167
                            000000G----
                                                                 JMP · · · CPXX
59
60
61
                                                                 REMOVE · BREAKPOINT · (DISABLE)
62
63
64
                                                                 CP>OF
65
                                                     OF2::
    000112
                                                                                                                 CLEAR BREAKPOINT FLAG:
SEND 0 TO CP-CNTL REG:
EXECUTE TRANSFER:
CLEAR CSR2:
GET-NEXT-COMMAND:
66
    000112
                 042767
                             000000G · 000000G
                                                                 BIC:
                                                                             #BREAK, BASE
                                                                             -(SP)
67
    999129
                 005046
                                                                 CLR:
68 000122
69 000126
                                                                             CPCR
                                                                 CALL
                                                                 CLR
                                                                             QR$CR2
                                                                             CPXX
70
71
72
73
74
75
76
77
79
    000132
                 000167
                             000000G
                                                                                                                                                         . j. # (%)
                                                                 \texttt{LOAD} \cdot \texttt{ALL} \cdot \texttt{CP} \cdot \texttt{REGISTERS} \cdot \texttt{WITH} \cdot \texttt{THE} \cdot \texttt{SAME} \cdot \texttt{PATTERN} \cdot \texttt{CP} \\ \texttt{LR} \cdot \texttt{FFFF} \cdot
                                                     ;
    000136
000136
                                                     LR2::
                                                                                                                 ;LOOK.FOR.PATTERN:IN COMMAND.LINE
;OK. CONVERT.PATTERN
;NOTHING:THERE:
                                                                 CALL
                                                                             FIND
     000142
                 103004
                                                                             FRR4
 80
     000144
                                                                 CALL
                                                                  JMP.
                                                                             CPXX
     000150
                 000167
                             ийийийи
 81
 82
    000154
                                                      1$:
                                                                  CALL
                                                                             PACK
                                                                                                                  ;CONVERT.PATTERN.(SET.UP. "BINUD")
                                                                                                                  OK, CONTINUE
ERROR ON CONVERSION
 83
     000160
                                                                 BCC -
                                                                             2$
 84 000162
                                                                 CALL
                                                                             ERR5
 85 000166
                 000167
                             999999G
 86
                                                                 GALL - SUBROUTINE - IN - CP - TO - LOAD - REGISTERS -
 87
 88
                                                                                                                  :16 REGISTERS
     000172
                 012704
                                                      2$:
                                                                              #16..R4
 89
                                                                                                                  REGISTER INDICATOR:
LOAD A CP REGISTER:
INC TO NEXT REG
     000176
                 005000
                                                                  CLR -
                                                                             RØ
                                                                             LDREG.
 91
     000200
                                                      34:
                                                                  CALL
                                                                  INC.
                                                                              RØ
                 005200
 92
     000204
                                                                  DEC
                                                                              R4
                                                                                                                  ;FINISHED ALL REGS ?
     000206
                 005304
 93
     000210
                  001373
                                                                  BHE
                                                                              3$
                                                                                                                  :NO. CONTINUE
 94
                                                                  JMP
     000212
                  000167
                             000000G
                                                                              CPXX
 96
97
 98
                                                                  PRINT · CP · REGISTERS ·
                                                                  CP>RG
 99
                                                                  CALL SUBROUTINE IN CP . TO READ REGISTERS
100
101
102
     000216
                                                      RG2::
                                                                                                                  :PRINT-IN-2-SETS OF-8 REGS-EACH
                                                                  MOV
                                                                              #2,R4
104 000216
                  012704
                              000002
                                                                                                                  :REGISTER INDICATOR
                                                                  CLR
                                                                              RØ
105
     000222
                  005000
                                                                                                                  :R5 -> PRINT LINE:

:PRINT 8 REGS ON A LINE:

:READ A CP REGISTR'

:CONVERT TO ASCII:

:BUMP : PRINT TO ASCII:

:BUMP : PRINT TO ASCII:

:BUMP : PRINT TO ASCII:
                  012705
                              000000G
                                                      1$:
                                                                              #PRINT,R5
185
     000224
     000230
                  012703
                                                                  MOV:
                                                                              #8.,R3
107
                                                                  CALL
     000234
                                                      2$:
                                                                              REREG -
                                                                              UNPK
     000240
000244
                                                                  CALL
109
                                                                  INC
                                                                              R5
                  005205
110
                 005200
005303
     000246
                                                                  THO
                                                                              RØ
111
                                                                  DEC
                                                                              R3
112.000250
                                                                                                                  ;STAY-ON-CURRENT-LINE-
;WRITE-LINE-TO-CONSOLE
                                                                  BNE
113 000252
                  001370
114 000254
                                                                              CONSOL .
```

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CPBUG1 . . M

```
CPBUG1 MACRO M1110 27-MAR-80 14:41 PAGE 5-2 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
                     005304
                                                                 DEC -
                                                                            R4
                                                                                                            :DO-SECOND SET-OF-8
          000262
                     001360
                                                                 BNE
                                                                            15
                                                                 JMP
                                000000G
     117
          000264
                     000167
     118
     119
                                                                 SINGLE - STEP - A - NUMBER - OF - TIMES -
     120
                                                                 CP>PC-4
     121
122
123
     124
125
          000270
                                                      PC2::
                                                                                                             :LOOK-FOR-COUNT-IN-COMMAND-LINE-
                                                                 CALL.
                                                                            FIND
          000270
000274
     126
                                                                                                             OK, CONTINUE
                      103004
                                                                 BCC.
                                                                                                             :COUNT-MISSING
      127
           000276
                                                                 CALL
                                                                            ERR4
                                                                            CPXX
     128-000302-
                     000167
                                йййййййG
                                                                 .IMP -
                                                                                                             :CONVERT.COUNT.
:OK, CONTINUE.
:ERROR.ON.CONVERSION
                                                                 CALL
                                                                            PACK
                                                       1$:
      129
          000306
      130
           000312
                                                                 BCC
                                                                            2$
                      103004
      131
           000314
                                                                 CALL
                                                                            ERR5
      132
133
          000320
                      000167
                                000000G
                                                                 JMP
                                                                            CPXX
                                                                                                             ;COUNT:=:0 ?:
;NO, CONTINUE:
;COUNT:MUST:BE:GT:0
           000324
                      005767
                                                                 TST-
                                                                            BINUD.
      135
           000330
                      001004
                                                                 BHE
                                                                            3$
                                                                            ERR5
      136
           000332
                                                                 CALL
           000336
                                                                 JMP.
      137
                      000167
                                 000000G
                                                                                                             ;SAVE·COUNT·
;ENTER·SS·COMMAND·
           000342
                                 000000G-177430
                                                                 MOV.
                                                                            BIHWD, SSCHT
      139
           000350
                      000460
                                                                            SSCLR
      140
      141
                                                                 SINGLE-STEP
CP>SS-
CP>SS-6
      142
143
      144
                                                                 CP>SS-6 2-
      145
      146
147
      148
           000352
                                                                                                             ;LOOK FOR START ADDR IN COMMAND LINE;NONE THERE, USE CURRENT MAR
;CONVERT START ADDRESS
           000352
                                                                 CALL
                                                                            FIND
      149
                                                                 BCS-
CALL
BCC-
                                                                            SSCLR-
      150
           000356
                      103455
                                                                            PACK
      151 000360
152 000364
                                                                                                             OK, CONTINUE.
                                                                             1$
                      103004
                                                                            ERR5
      153
           000366
                                                                  CALL
                                                                                                             ; ERROR · ON · CONVERSION
           000372
                      000167
                                 000000G
                                                                  JMP.
                                                                            CPXX
      155
                                                                            CSHIGH, BINWD
                                                                                                             : IS - START - ADDRESS - IN RANGE
           000376
                      026767
                                 000000G-000000G-1$:
      156
                                                                                                             ;YES, CONTINUE.
;OUT.OF.RANGE.HIGH.
           000404
                                                                            2$
ERR10
                      003004
                                                                 CALL
JMP·
           000406
                      999167
                                 000000G
      159
           000412
      160
                                                                 SS START ADDRESS FOUND AND CONVERTED: NOW-LOOK FOR COUNT (NUMBER OF SINGLE STEPS). EG: IN THE COMMAND: CP > SS < 6 ^2 . . . . .
      161
      162
      163
164
                                                                  LOOK FOR THE 121
      165
                                                                                                             :SAVE-START-ADDRESS-
:LOOK-FOR-COUNT-IN-COMMAND-LINE
                                                                 MOV
                                                                            BINWD, SSTRT.
      166
           000416
                      016767
                                 000000G-177356
                                                                            FIND
                                                                  CALL
      167
           000424
           000430
                                                                  BCS
                                                                             5$
      168
                      103421
```

PACK

ERR5

3\$

OK, CONTINUE.

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:ERROR · OH · CONVERSION

CALL

CALL

BCC

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169

170

000432

000436 000440

27-MAR-80 14:41 PAGE 5-3 Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3 172 - 000444 000167 000000G 174 000450 005767 000000G 3\$: TST: BINWD :COUNT-=-0 ? BNE ;NO, CONTINUE 175 000454 4\$ 001004 COUNT MUST BE GT. 0 000456 CALL ERR5 176 000462 000167 000000G .TMP CPXX :SAVE - COUNT-178 000466 016767 000000G-177304 44: MOV: BINWD, SSCHT 179 SEQUENCE: UP: TO: SINGLE: STEP: ADDRESS: (IF: NECESSARY) 180 SINGLE CLOCK ALL TO EXECUTE ONE INSTRUCTION NB. SINGLE STEP CANNOT BE USED IN SENDING THE BCL ADDRESS TO THE CP. 181 182 183 ;PROVIDE START ADDRESS FOR SEQUENCER; ;SEQUENCE ONLY UP TO START ADDRESS; ;CLEAR CP CONTROL REG; MOV-185 000474 016746 177302 5\$: SSTRT, - (SP) 000500 CALL: SEQCS 186 000504 CLR --(SP) 187 005046 188 000506 189 SET-UP-FOR-SINGLE-CLOCK-190 191 192-000512 193-000520 012767 100000 176422 SSCLR: MOV #Q\$SM,QR\$CR2 :SET-SEARCH-MODE CLEAR PPS AND CP NO-CLOCKS CLEAR SELECT BITS 012746 036000 3\$: MOV. #<Q\$CNC+Q\$RNC>,-(SP) #<Q\$CSEL>,(SP) 194 000524 052716 000360 BIS 052716 195 000530 001001 #<Q\$LBD+Q\$LBP>.(SP) :CLEAR DRIVE AND PULSE 196 000534 012746 020000 MOV: #Q\$CSP,-(SP) ;SET-SINGLE-CLOCK-ALL 197 999549 CALL CLR : MRITE - CSR1 CSR4 ;CLEAR·NOTHING· ;SET·PPS·AND·CP·NO+CLOCKS 000544 005046 198 -(SP) 199 000546 012746 MOV. #<Q\$CNC+Q\$RNC>,-(SP) 200 000552 CALL CSR1 ; AND · RE-WRITE · CSRI 201 202 SINGLE-STEP-A-NUMBER-OF-TIMES-DEPENDING-UPON-THE 203 COUNT IN FIELD 'SSCHT'. 204 ξ. 000556 000562 005067 176422 GLR 285 QR\$CR2 :SET-LOAD MODE 286 005767 177212 TST. SSCHT. :SS-A-NUMBER-OF-TIMES-?---207 000566 BEQ :NO, EXIT-SS-RTH-001403 4\$ 208 000570 005367 177204 DEC SSCNT EXECUTE NEXT INSTRUCTION 209 210 000574 001346 BNE SSCLR 211 000576 212 000602 4\$: CALL CPMP :PRINT-MICROPGM-ADDRESS 000167 000000G

CPBUG4 · · M

D-M1110

```
CPBUG1 MACRO M1110 27-MAR-80 14:41 PAGE 6
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```

```
214
215
216
217
218
219 000606
220 000606
221 000616
222 000616
223 000622
224 000624
225 000630
226 000630
227 000640
228 000645
229 000645
230 000652
                                                                                                  PRINT-CP-MICROPROGRAM-ADDRESS
                                                                                 CPMP:
                           012746
                                                                                                                    #<CSADRD>.-(SP)
CPCR
CPLB
                                                                                                  MOV
                                                                                                                                                                          #READ CS ADDRESS SELECT BIT FOR A SURITE CP CONTROL REGISTER FOR A SEQUEST CP TO LOD BUS
                                                                                                  CALL
                                                                                                   CALL
                           012601
                                                                                                                     (SP)+,R1
#176000,R1
#PRINT,R5
                                                                                                  MOV.
                                                                                                                                                                          :UNLOAD MPA
:CLEAR UPPER 6 BITS
:POINT TO PRINT LINE
                           042701
                           012705
                                             000000G
                                                                                                   MOV.
                                                                                                  CALL
CALL
CLR:
                                                                                                                     UNPK
                                                                                                                                                                          CONVERT MPA
WRITE TO CONSOLE
CLEAR CP CR
                                                                                                                    CONSOL
-(SP)
                           005046
                                                                                                   CALL
                                                                                                                    CPCR
                                                                                                  RETURN.
                           000001
                                                                                                                                                                                                                                200
                                                                                                   .END
```

```
CPBUG1 M 0 M1110 27-MAR-80 14:41 PAGE 6-1 Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
                                                                                                                                                                    Q$MSET=-000004
Q$MSP-=-100000
                                         BYTE39=-000047
                                                                                  BYTE90= .000132 .
                                                                                                                           MMOE - - 000004
ALTICKE = . 040000
                                         BYTE4 = 000004
                                                                                  BYTE91= 000133
                                                                                                                           MMURTE = . 000010
ALU0E - 004000
AT2 0000004
                                                                                                                           MNOBRE = 100000
MREN1 = 000001
MREN2 = 020000
MSYN = 0000440
                                  002 BYTE40 = 000050
                                                                                  BYTE92=-000134
BYTE93=-000135
                                                                                                                                                                     Q$NCLK= 176000
Q$PP = 000100
AT2
             000004RG
                                         BYTE41 = . 000051
                                                                                                                                                             USPP = 000100

USPPSW= 000320

USPP2 = 000300

USQHLT= 000013

002 USQL = 000043

USQLA = 000053
                                                                                  BYTE94= 000136
        - = · ****** GX-
BASE
                                         BYTE42= 000052
                                                                                  BYTE95= 000137
                                         BYTE43= 000053
BINWD = ****** GX
                                                                                  BYTE96= 000140
BYTE97= 000141
                                                                                                                                    = 000144
BITYAL = . 000000
                                         BYTE44= 000054
          = · 0000001
= · 0000002
                                         BYTE45= 000055
BYTE46= 000056
                                                                                                                           DE2
                                                                                                                                         000112RG
BIT0
                                                                                                                           PACK - ******* GX-
PC2 000270RG-
                                                                                  BYTE98= 000142
BIT1
          = 002000
                                         BYTE47 = . 000057
                                                                                  BYTE99= 000143
                                                                                                                                                                    .Q$QLB.=.000054
BITIO
                                                                                                                           PLB: = 000010
PLC: = 000020
PLD: = 000020
PLRUR: = 000200
PLR: EN = 000200
BIT11 = 004000
BIT12 = 010000
BIT13 = 020000
                                         BYTE48= 000060
BYTE49= 000061
BYTE5 = 000005
                                                                                  BYTVAL = 000144
CB(ALL = 001000
CBKCLK = 000400
                                                                                                                                                                     Q$QLR·=·000001
Q$QW = 000042
                                                                                                                                                                     Q$RDCD=-000005
          = 040000
= 100000
= 000004
                                         BYTE50= 000062
BYTE51= 000063
BYTE52= 000064
                                                                                  CNOBRE = 100000
CONSOL = ******* GX-
                                                                                                                                                                     Q$RDMD= 000006
Q$REBK= 001000
BIT15
                                                                                                                                                                    Q$REBR = 001000
Q$RNC = 006000
Q$RSC = 004000
Q$RSET = 000010
Q$SM = 100000
Q$SP = 000120
                                                                                   CPCCEN= 010000
                                                                                                                            PRINT = · ***** GX
BIT2.
                                                                                  CPCR· = ******** GX·
CPLB· = ******* GX·
CPMP· 000606R·
                                                                                                                    QR$CR1=\176420
QR$CR2=\176422
002\QR$LBR=\176424
BIT3
           = 0000010
                                         BYTE53=-000065
                                         BYTE54= 000066
BIT4
           = 0000020
           = 000040
                                         BYTE55= 0000067
BIT5
                                                                                                                                                                     Q$SP = 000120
Q$SP2 = 000340
           = 000100
                                         BYTE56 = . 000070
                                                                                                                            Q$ATTH= 000100
                                                                                   CPREAD = . 040000
 BIT6
                                                                                                                            Q$BCL.=.000001
Q$CCCP=.000040
Q$CHB.=.000400
                                         BYTE57 = . 000071
BYTE58 = . 000072
                                                                                  CPWRTE= 020000
CPXX = ********** GX
           = 000200
           = 000400
                                                                                                                                                                     REREG - = - жижжижи GX
BITS
                                                                                  CSAURD= 000004
CSAURD= 000004
CSEQCI= 100000
CSHIGH= ******** GX-
CSOE = 000040
CSRI = ********* GX-
           = 001000
                                         BYTE59=-000073
                                                                                                                                                                     RGQ.EN= 000200
 BIT9
                                                                                                                           USCHB: = 000400

Q$CLR: = 000040

Q$CLC: = 0300040

Q$CPC: = 030000

Q$CPC: = 000060

Q$CPC: = 000260

Q$CPC: = 010000

Q$CPC: = 010000
                                                                                                                                                                     RGO.VA= 020000
RG2 000216
BREAK - - ********* GX-
BYTE0 = *000000
BYTE1 = *000001
                                         BYTE6 = 000006
                                                                                                                                                                     RG2 000216RG 
SEQCS = ******* GX
                                                                                                                                                                                                      ∵002.
                                         BYTE60=.000074
BYTE61=.000075
                                                                                                                                                                                                       . ⊊
0.02 .
                                                                                                                                                                     SEQ.CI=-000010
 BYTE10 = . 000012
                                         BYTE62= 000076
BYTE11=-000013
BYTE12=-000014
BYTE13=-000015
                                                                                                                                                                     SSCLR: 000512R:
                                         BYTE63=-000077
BYTE64=-000100
                                                                                   CSWRTE - 000100
DBR.RD - 000001
                                                                                                                                                                     SSCHT.
                                                                                                                                                                                   000000R ...
                                                                                                                                                                                                       002
                                         BYTE64= 000100
BYTE65= 000101
BYTE66= 000102
BYTE67= 000103
BYTE68= 000104
                                                                                  DBR:RD= 000001
DB$CPP= 001457
DB$SPT= 000026
DB$TPC= 000023
DISPGS= 100000
                                                                                                                                                                     SSTRT.
                                                                                                                                                                                   000002R ·
                                                                                                                                                                                                       002.
                                                                                                                                                                                                 . tr :
BYTE14=-000016
BYTE15=-000017
BYTE16=-000020
                                                                                                                            Q$CSEL = .000360
Q$CSET = .000002
                                                                                                                                                                     SS2 -
                                                                                                                                                                                   000352RG
                                                                                                                                                                                                       002
                                                                                                                                                                     S$CLR - = - 000000
                                                                                                                            Q$CSP -- 020000
                                                                                                                                                                     S$LA = 000001
                                                                                                                                                                              = 00000
= 000005
= 000006
                                                                                                                            Q$DMA · = · 000001
Q$ENBK = · 040000
Q$ENOP = · 020000
 BYTE17= 000021
                                          BYTE69= 000105
                                                                                   DMAAWR= - 000005
                                                                                                                                                                     S$QB
                                         BYTE7 = 000007
BYTE70= 000106
BYTE71= 000107
                                                                                   DMARRD = : 000003
                                                                                                                                                                     9#0R
 BYTE18= 000022
                                                                                   DMARWR = . 000003
ENBR - = . 010000
                                                                                                                                                                               = 000004.
                                                                                                                                                                     S$QX
 BYTE:9=-000023
BYTE2-=-000002
                                                                                                                                                                               = 000007
= 000010
                                                                                                                            Q$FAL - = . 004000
                                                                                                                                                                     S$SR
                                                                                   ERR10 = ******* GX*
ERR4 = ****** GX*
ERR5 = ******** GX*
                                                                                                                            Q$FC = 000045
Q$FC = 000044
Q$FP = 000046
Q$HBF = 000002
Q$ICP = 000006
Q$IHB = 000003
 BYTE20= 0000024
                                          BYTE72= 000110
                                                                                                                                                                     S$S1
S$S2
 BYTE21 = 000025
BYTE22 = 000026
                                                                                                                                                                                = 000014
                                          BYTE73= 000111
BYTE74= 000112
                                                                                                                                                                      TD$CTR=-176370
                                                                                   FIND: = ******* GX-
LBCP: = ****** GX-
LDREG: = ****** GX-
                                                                                                                                                                     TD$CTW= 176360
TD$INL= 004000
 BYTE23= 000027
                                          BYTE75 = . 000113
 BYTE25=-000030
BYTE25=-000031
                                         BYTE76= 000114
BYTE77= 000115
                                                                                                                                                                      TD$MEM= 000270
                                                                                   LOC.EN= 000100
                                                                                                                                                                      TD$0AR= 176344
TD$0TR= 176346
TD$0RD= 000274
 BYTE26= 000032
                                          BYTE78= 000116
                                                                                                                            Q$IHRL=.000002
                                                                                   LOS.WA= 040000
LOS.WB= 100000
LR2 000136
                                                                                                                            Q$IMRP=.000007
Q$LBD:=.001000
 BYTE27= 000033
                                          BYTE79= 000117
 BYTE28= 000034
                                          BYTE3 = 000010
                                                                                                                     002 · Q$LBDP = · 001001
                                                                                                                                                                      TD$SW = 176376
                                                                                                000136RG
 BYTE29= 0000035
                                          BYTE80 = . 000120
BYTE81 = . 000121
                                                                                   MAREN 1 = . 000001
                                                                                                                            Q$LBP - = - 000001
                                                                                                                                                                      TD$TAR= 176372
 BYTE3 = 0000003
                                          BYTE82=-000122
                                                                                   MAREN2 = . 004000
                                                                                                                            Q$LDCD=-000003
                                                                                                                                                                      TD$TAW=:176362
 BYTE30 = . 000036
                                                                                                                                                                      TD$TDR=-176374
 BYTE31 = . 000037
                                          BYTE83=-000123
                                                                                   MARLOD= 010000
                                                                                                                             Q$LDMD= .000004
                                                                                                                                                                      TD$TDW= 176364
T$AD ~~ ;000020.
                                                                                   MAROUT = 000002
                                                                                                                            Q$LDPP=:002000
Q$LHP:=:010000
 BYTE32 = . 000040
                                          BYTE84= 000124
                                                                                   MAR.LO= 002000
MAR.OU= 000040
 BYTE33=-000041
                                          BYTE85=-000125
BYTE86=-000126
                                                                                                                                                                      ¥$BA. ≼√000002
T⊈BD = 000010
                                                                                                                             Q$MNC · = · 140000
 BYTE34= 000042
                                                                                                                            Q$MR - = 000052
Q$MRP - = 000040
                                          BYTE87 = . 000127
                                                                                   MBKALL= 001000
 BYTE35= 000043
                                                                                                                                                                      T$BSO = 100000
                                                                                   MBKCLK = 000400
MMADRD = 000100
 BYTE36= 0000044
                                          BYTE08= 000130
                                                                                                                                                                                = 000020
BYTE37= 000045
BYTE38= 000046
                                          BYTE89= 000131
                                                                                                                            Q$MRP2= 000240
                                                                                                                                                                      T$BT
                                                                                   MMLEFT= 0000002
                                                                                                                            0$MSC - = - 040000
                                                                                                                                                                      T$BTAR = . 0000,30
                                          BYTE9 = 000011
                                                         Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
```

```
CPBUG4 - MACRO - H1110 27-MAR-80 14:41 PAGE - 5-2
SYMBDI - TABLE - Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
T$8TD - = - 002000
                                 T$SEG2 = · AAAAAA1
                                                                 WORD27=-000066
                                                                                                 WORD52=-000150
                                 T$SEG3--000001
T$SO--000001
                                                                                                                                  WORD78=-000234
T$CD: =:000100
T$CLK:=:002000
                                                                 WORD28=-000070
WORD29=-000072
                                                                                                  WORD53= 000152
                                                                                                                                 WORD79= 000236
WORD8 = 000020
                                                                                                 WORD54= 000154
T$DISK= 000200
                                 T$UBUS = 100000
                                                                 WORD3 = 000006
                                                                                                 WORD55= 000156
                                                                                                                                  WORD80= 000240
T$DRD - = - 000004
                                 T$1CLK= . 000400
                                                                 WORD30= 000074
                                                                                                 WORD56= 000160
                                                                                                                                 WORD81= 000242
WORD82= 000244
WORD83= 000246
T$EMEM= : 010000
                                 T$8BEN= 000020
                                                                 WORD31= 000076
                                                                                                 WORD57= 000162
T$FSAA = . 000000
                                UBD: IN= 000020
UNPK = ********* GX
                                                                 WORD32= 000100
                                                                                                 WORD58= 000164
T$FSAB=-000004
                                                                 WORD33=-000102
WORD34=-000104
                                                                                                 WORD59= 000166
                                                                                                                                 WORD84= 000250
WORD85= 000252
                                WORD0 = 000000
WORD1 = 000002
T$FSAC= · 000014
                                                                                                 WORD6 = 000014
T$FSB2=-000010
                                                                 WORD35 = 000106
                                                                                                 WORD60= 000170
                                                                                                                                  WORD86= 000254
T$IB - 000026
                                WORD10--000024
                                                                 WORD36=-000110
WORD37=-000112
WORD38=-000114
                                                                                                 WORD61= 000172
                                                                                                                                 WORD87= 000256
T$IBAR=.000024
T$IBE.=.020000
T$IBF.=.040000
                                 WORD11= 000026
                                                                                                 WORD62= 000174
                                                                                                                                 WORD88= 000260 (
WORD89= 000262
                                WORD12=-000030
                                                                                                 WORD63=-000176
                                WORD13= 0000032
                                                                 WORD39= 000116
                                                                                                 WORD64= 000200
                                                                                                                                 WORD9 = 000022
T$ICD - = -000040
                                WORD14= 000034
WORD15= 000036
                                                                 WORD4 - 000010
                                                                                                 WORD65= 000202
WORD66= 000204
                                                                                                                                 WORD90 - 000264
T$MODE=:004000
                                                                 WORD40= 000120
                                                                                                                                 WORD91=-000266
T$08 -- 000036
T$08E -- 004000
                                WORD16= 000040
                                                                 WORD41=-000122
                                                                                                 WORD67= 000206
                                                                                                                                 WORD92=-000270
                                WORD17= 000042
                                                                 WORD42=-000124
WORD43=-000126
                                                                                                 WORD68= 000210
                                                                                                                                 WORD93= 000272
T$0BF - = - 010000
                                WORD18=-000044
WORD19=-000046
WORD2-=-000004
                                                                                                 WORD69=.000212
WORD7 =.000016
                                                                                                                                 WORD94= 000274
T$0BRA= . 000034
                                                                 WORD44= 000130
                                                                                                                                 WORD95= 000276
T$0BWA=.000032
                                                                 WORD45= 000132
WORD46= 000134
                                                                                                 WORD70= 000214
                                                                                                                                 WORD96 = 000300
WORD97 = 000302
T$0UTA= 100000
                                 WORD20= 000050
                                                                                                 WORD71= 000216
T$RBD0=.000200
                                WORD21= 000052
WORD22= 000054
                                                                 WORD47 = . 000136
                                                                                                 WORD72= 000220
WORD73= 000222
                                                                                                                                 WORD98= 000304
T$RNB · = · 000040
                                                                 WORD48= 000140
                                                                                                                                 WORD99 - 000306
T$RSET=:040000
                                WORD23= 000056
                                                                 WORD49=-000142-
                                                                                                 WORD74= 000224
T$SC. = 040000
T$SCLK= 020002
                                                                                                                                 WRDVAL = . 000310.
                                WORD24= 000060
                                                                 WORD5 - 000012
                                                                                                 WORD75= 000226
WORD76= 000230
                                                                                                                                  KTREAD= 0000010
                                WORD25= · 000062
                                                                 WORD50 = 000144
                                                                                                                                 XTWRTE = . 000400
T$SEG1 = 000000
                                WORD26= 0000064
                                                                 WORD51=-000146
                                                                                                 WORD77= 000232
. ABS.
          000000
                         000
           000000
                         001
CPBUG1
           000654
                         002
ERRORS · DETECTED:
                        0
VIRTUAL MEMORY USED:
                            3220 WORDS
                                             ( 13 PAGES)
DYNAMIC MEMORY: 3860 WORDS ( 14 PAGES
ELAPSED TIME: 00:00:44
CPBUG1.6PBUG1~SP=C20.13IM,C20.13CPBUG1
                                       ( 14 PAGES)
```

CPBUG2 MACRO M1110 27-MAR-80 14:42 PAGE 5 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3

```
.FITLE-GPBUG2.
.PSECT-CPBUG2-
234567890
     000000
                                                                                 HARDWARE QUERY RESOLVER 'MANUAL' DEBUGGING AIDS
                                                                                 CONTROL PROCESSOR TEST ROUTINES
                                                                                  ****
                                                                                                   PROTOTYPE · VERSION ·
                                                                                 COMMANDS:
                                                                                                 PROCEED FROM BREAKPOINT
ii
                                                                                 FR
                                                                                                 FREE RUN-
13
14
15
                                                                      *************
                                                                                 DISCLAIMER:
IN ORDER: FOR THE BREAKPOINT ROUTINES TO WORK PROPERLY THERE MUST BE A 'PIPELINE REGISTER ONLY' CLOCK. THIS WOULD ALLOW THE CHANGING OF PLR CONTENTS WITHOUT CAUSING AN INSTRUCTION TO BE EXECUTED. AS IT STANDS NOW, THE PIPELINE REGISTER CLOCK IS TIED TO THE SEQUENCER CLOCK, WHEN, A BREAKPOINT HAS BEEN REACHED, ANY OPERATION INVOLVING A PLR CLOCK (EG. PRINTING MICROPGM MEMORY) WILL EXECUTE THE INSTRUCTION IN THE PLR, THE 2900 SEQUENCER STACK IS: ALSO SOMETIMES CHANGED.
16
17
18
20
21
22
23
24
25
26
27
28
29
31
32
                                                                                 ALSO SOMETIMES CHANGED.
                                                                      **************
                                                                                 .MCALL WTSE$S,CLEF$S,WTLO$S,RDAF$S
33
34
                                                                                  .NLIST.
     000000
                                                         120
124
                                                                  MRPMSG:
                          115
                                          122
                                                                                 .ASCIZ
                                                                                                ZMRP BREAKPOINTZ
35
     000017
                          110
                                          111
                                                                  HBMSG:
                                                                                  .ASCIZ-
                                                                                                /HIT LIST INTERRUPT/
36
37
     000042
                          110
                                                         114
                                                                  HRLMSG:
                                                                                 .ASCIZ
                                                                                                /HRL INTERRUPT/-
/DMA INTERRUPT/-
     000060
                          104
                                          115
                                                                  DMAMSG:
                                                                                 .ASCIZ
38
     000076
                          125
                                          116
                                                                  UNMSG:
                                                                                 .ASCII
                                                                                                /UNIDENTIFIED · INTERRUPT: CSR2 · = · / ·
39
                                                                                  .EVEN
40
                                                                                 .NLIST - CND
```

```
AND WELL THE
                0-M1110 27-MAR-80 14:42- PAGE-6
CPBUG2 · M
                                              Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
       43
                                                                   DEBUGGING ROUTINES.
       44
       45
       46
                                                                   PROCEED:
THE 'GO' COMMAND RUNS THE CP MICROCODE ONLY
TO RUN BOTH CP AND MRP USE FR?
       47
       49
       49
                                                                   EG. CP>GO
       51
52
                                                                         CP>G0 22
       53
           000136
                                                        G02::
           000136
                                                                   CALL
                                                                               FIND
                                                                                                                ;LOOK · FOR · START · ADDRESS ·
       55
           000142
                       103443
                                                                   BCS.
                                                                               CGO:
                                                                                                                ; NONE, GO FROM PRESENT ADDRESS
       56
                                                                   CALL
                                                                                                                CONVERT START ADDRESS
           000144
                                                                              PACK
           000150
                       103004
                                                                               1$
                                                                   BCC -
                                                                                                                ERROR ON CONVERSION
           000152
                                                                               ERR5
                                                                    CALL
       59
           000156
                       000167
                                 000000G
                                                                    JMP
                                                                               CPXX
       60
           000162
                                                                                                                :IS-START-ADDRESS-IN RANGE
:YES, CONTINUE-
:OUT-OF-RANGE-HIGH-
       61
                       026767
                                  000000G 000000G 1$:
                                                                   CMP
                                                                               CSHIGH, BINWD
       62
           000170
                       003004
                                                                    BGT.
                                                                              ERR10
       63
64
           000172
                                                                   CALL
JMP·
           000176
                       000167
                                 000000G
                                                                               CPXX
       65
66
67
68
69
70
                                                                    IF THE COMMAND IS:
                                                                   1F THE COMMINDED TO CPSGO 0 THEN SCAN THE COMMAND LINE FURTHER FOR AN THE COMMAND LINE FURTHER FOR AN THE CPSGO 0 NOT THE NOT MEANS NOT TO ERASE THE QUB'S SQ. THAT THEY MAY
       71
72
73
74
                                                                   BE LOOKED AT.
                                                                                                                    000202
                       005767
                                  000000G
                                                                               BINWD
                                                                                                                ; GO · FROM · ZERO ·
                                                                                                                ;NO. CONTINUE:
;LOOK.FOR.'N' IN COMMAND LINE
;NOT THERE, ERASE QLB
;MAKE SURE IT IS AN 'N'
           000206
000210
                       001015
                                                                    BNE
                                                                               4$
       75
                                                                               FIND
                                                                    CALL
       76
77
78
            000214
                                                                    BCS
                                                                               4$
           000216
000222
                       122711
                                 000116
                                                                    CMPB
                                                                               #*H, (R1)
                       001404
                                                                    BEQ.
                                                                               345
                                                                                                                 OK, CONTINUE.
           000224
                                                                               ERR12
                                                                    CALL
                                                                                                                :BAD COMMAND
:SET FLAG EOR NO OLB FRASE
:PROVIDE START ANDRESS FOR SEQUENCER
:SEQUENCE ONLY UP TO START ADDRESS
       80
           000230
                       000167
                                                                    JMP
                                                                               CPXX
       81
           000234
                       052767
                                  000000G-000000G-3$:
                                                                    BIS.
                                                                               #MEQLB, BASE
       82
           000242
                       016746
                                  000000G
                                                        4$:
                                                                    MOV.
                                                                               BINWD,-(SP)
       83
           000246
                                                                    CALL
                                                                               SECOS:
       84
                                                                    SET UP TO FIELD INTERRUPTS OPERATIONAL INTERRUPTS ARE HIT BUFFER INTERRUPTS, HRL INTERRUPTS, AND DMA INTERRUPTS.
       85
       86
                                                         ź
       88
       89
           000252
                                                         OG0:
        90
           000252
                       012767
                                  000600
                                                                    MOV.
                                             176422
                                                                               #<Q$CHB+Q$CHRL>,QR$CR2.;CLEAR.OPERATIONAL.INTERRUPTS.
       91
92
                                                                               #Q$REBK,QR$CR2
                                                                                                                :RE-ARM INTERRUPTS
       93
                                                                    READ · MICROPGM · ADDRESS · TO · SEE · WHERE · SEQUENCER, · ·
       94
                                                                    IS CURRENTLY SITTING.
       95
                                                                               #CSADRD,-(SP)
       96
           000266 012746 000004
                                                                    MOV:
           000272
                                              CALL CPCR :ENABLE CS ADDRESS - ALSO REINHIBIT BROWN CALL CPLB :REQUEST CP TO LOD BUS

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                                                                               CPCR
           000276
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CPBUG2: MACRO:M1110 27-MAR-80 14:42: PAGE:6-1 Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
           99
                 000302
                                    005046
                                                                                                               GLR.
                                                                                                                                 -(SP)
                                                                                                                                                                                        : CLEAR-THE-CONTROL-REGISTER
          100
                 000304
                                                                                                               CALL
                                                                                                                                 CPCR
                                                                                                                                                                                       CP-WORD-RETURNED-ON STACK-CLEAR-UNUSED-BITS-
          101
                  000310
                                     012601
                                                                                                               MOV.
                                                                                                                                  (SP)+,R1
          102-000312- 042701
                                                       176000
                                                                                                                                 #176000.R1
          193
                                                                                                               IF GO.FROM.ZERO. INITIALIZE.PPS.AND.CLEAR.HIT.BUFFER
          105
                  000316
000320
          106
107
                                     005701
                                                                                                               TST.
                                                                                                                                                                                        :START-FROM-ZERO
                                     001011
                                                                                                               BNE
                                                                                                                                  10%
                                                                                                                                                                                        ; NO, CONTINUE
                  000322
                                                                                                               CALL
                                                                                                                                 PPINIT.
                                                                                                                                                                                        :D0.IT.
          109
                  000326
                                     012700
          119
                                                       BRRRRRR
                                                                                                               MOV-
                                                                                                                                 #HLB,R0
                                                                                                                                                                                        ; POINT · TO · HIT · BUFFER
                  000332
                                     016702
                                                       000000G
                                                                                                                                                                                        :LOAD NUMBER OF WORDS IN HIT BUFFER
          111
                                                                                                               MOV:
                                                                                                                                 BCL,R2.
                                                                                            20$:
                                                                                                               CLR
                                                                                                                                  (R0) +
          113 000340
                                     005302
                                                                                                               DEC
                  000342
          114
                                     001375
                                                                                                               BNE
                                                                                                                                  20$
          115
                                                                                                               IF A BREAKPOINT IS IN EFFECT, BRANCH TO CODE THAT PREPARES TO FIELD A BREAKPOINT INTERRUPT; ELSE START FREE RUN
          116
          117
          118
                                                                                                               WITHOUT BREAKPOINTS.
          119
                                                                                                                                                                                         :PROCEED FROM BREAKPOINT:
:YES, SET UP FOR BREAKPOINT:
                   000344
                                     032767
                                                       000000G · 000000G · 10$:
                                                                                                               BIT
                                                                                                                                  #BREAK,BASE
          124
                  000352
                                     001075
                                                                                                               BNE
                                                                                                                                 CBK
          122 - 000354
                                     012767
                                                        120000
                                                                          176422
                                                                                                               MOM
                                                                                                                                 #<Q$SM+Q$ENOP>.QR$CR2
                                                                                                                                                                                         : ENABLE · OPERATIONAL · INTERRUPTS
                                     012746
                                                                                                                                                                                         #CLEAR-DRIVE AND PULSE 

#CLEAR-PPS AND PULSE 

#CLEAR-PPS AND POLOCKS 

#SET-NOTHING
                  000362
          123
                                                        000360
                                                                                                               MOM-
                                                                                                                                 #<Q$CSEL>,-(SP)
                                     052716
                   000366
                                                        001001
                                                                                                                                  #<Q$LBD+Q$LBP>.(SP)
                                                                                                               BIS
          125
                  000372
                                     052716
                                                                                                               BIS
                                                                                                                                  #<Q$CNC+Q$RNC>.(SP)
          126
127
                  000376
                                     005046
                                                                                                               CLR
                                                                                                                                  -(SP)
                   000400
                                                                                                               CALL
                                                                                                                                 CSR1
                                                                                                                                                                                         :RE-WRITE CSR1
          129
                                                                                                               IF STARTING FROM ZERO, SEND THE BCL ADDRESS OVER TO
          139
                                                                                                               THE . CP .
          131
          132-000404
                                     005701
                                                                                                               TST
                                                                                                                                  R1
                                                                                                                                                                                         :START-FROM-ZERO-?
                   000406
                                     001026
                                                                                                               BHE
                                                                                                                                  1$
                                                                                                                                                                                         :WORD · NOT · ZERO ·
:SET · ATTN · CODE · = · 1
          134
                  000410
                                     012767
                                                        000001
                                                                          176424
                                                                                                               MOV
                                                                                                                                  #Q$BCL,QR$LBR
                  000416
          135
                                     012767
                                                        120100
                                                                          176422
                                                                                                               MOV
                                                                                                                                  #<Q$ATTN+Q$SM+Q$ENOP>,QR$CR2.;SET.ATTN.CODE.READY
                   000424
                                     016701
                                                         176422
                                                                                                                                                                                         ;READ CSR2
;IS-ATTN-BIT-CLEAR-
;NO, LOOP-UNTIL-IT-IS-
          136
                                                                                             11$:
                                                                                                               MOV
                                                                                                                                  QR$CR2,R1
          137
                   000430
                                     032701
                                                        000100
                                                                                                               BIT
                                                                                                                                  #@$ATTN,R1
          138
                   000434
                                     001373
                                                                                                                                  11$
                                                                                                               BNE
          139
                   000436
                                      012767
                                                                                                               MOV
          140
                                                        000000G-176424
                                                                                                                                  #BCL,QR$LBR
                                                                                                                                                                                         :MOVE - BCL - ADDR - TO - LOD - BUS - REG -
                                                                                                                                 ##CQ$CCCP+Q$$M+Q$ENOP>,Q$$CR2-;$ET-CC-TO-CP-$LAVE-DATA READY-
QR$CR2.R1 ;READ C$R2
#Q$CCCP,R1 ;IS-CC-TO-CP-CLEAR-
12$ ;NO, LOOP-UNTIL-IT-IS-
          141 000444
142 000452
                                     012767
016701
                                                        120040
                                                                                                               MOV.
                                                                         176422
                                                        176422
                                                                                             12$:
                                     032701
                                                                                                               BIT
                   000456
                                                        000040
          144
                   000462
                                     001373
          145
                                                                                                               PROVIDE FOR INTERRUPT FROM TERMINAL TO RETURN CONTROL TO USER (IN CASE MICROCODE HANGS UP OR RUNS FOREVER).
          146
           147
          148
149
                                                                                                                CALL SUBROUTINE THAT WAITS FOR INTERRUPTS THEN DECODES
                                                                                                                THEM:
          150
          151
                  000464
                                                                                             1$:
                                                                                                               GLEF$S: #EFN.4
                                                                                                                                                                                         :CLEAR QIO EVENT FLAG
                                                                                                                                                                                          : ISSUE TO TO TERMINAL STATE OF THE STATE OF
          153 000476
                                                                                                               CALL
                                                                                                                                  HANG2
          154 000502
                                                                                                                                                                                         :WAIT-FOR-EVENTS-
                                                                                                               CALL
                                                                                                                                  WINT
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KILL QIO

155

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CPBUG2 - M
              10 M1110 27-MAR-80 14:42 PAGE 6-2 Approved For Release 2005/07/11 CIA-RDP85-00514R000200020001-3
     156
     157
                                                            TURN-OFF-CLOCKS, SET-LOAD-MODE, PRINT-MICROPGM-ADDRESS
     159
         000512
                   005046
                                                           CLR
                                                                     -(SP)
                                                                                                   : CLEAR - NOTHING
                                                           MOV
                             936999
                                                                     #<Q$CNC+Q$RNC>,-(SP)
                                                                                                   ;SET-PPS-AND-CP-NO-CLOCKS
;WRITE-CSR 1
     169
         000514
                   012746
         000520
                                                            CALL
                                                                     CSR1
     161
         000524
                                                            CLR.
                                                                                                   ; SET · CP · CONTROL · REG · TO · ZERO
     163
         000526
                                                            CALL
                                                                     CPCR
                                                                                                   :D0:IT:
                                                                                                   SET LOAD MODE
         000532
                                                            CLR:
                                                                     OR#CR2
     164
                   005067
                                                                                                   :PRINT-MICROPGM-ADDRESS
     165
         000536
     166
         000542
                   000167
                             000000G
                                                            JMP
                                                                     CPXX
     167
     168
     169
                                                            EXPECT: TO: HIT: A: BREAKPOINT:
     170
171
          000546
                                                 CBK:
         .000546
                                                            CLEF$S: #EFN.3
                                                                                                   :CLEAR BREAKPOINT EVENT FLAG
     173
     174 000560
                                                            GLEF$S: #EFN.4
                                                                                                   :CLEAR QIO EVENT FLAG
     175
                                                            SET-BKPT-ALLOW-BIT-IN-CP-CONTROL REG-
     176
177
                                                            SET-SEARCH-MODE
     178
                                                            SET-FREE-RUN CLOCK-
     179
          000572
                    012746
                              001000
                                                            MOV
                                                                      #CBKALLOW,-(SP)
                                                                                                   :SET · CP · CONTROL · BIT ·
     180
                                                                                                    ; WRITE · CP · CONTROL · WORD ·
     181
          000576
                                                            CALL
                                                                     CPCR
                                                                     #<Q$SM+0$ENBK+Q$ENOP>,QR$CR2 :SET SEAR
#<Q$CSEL>,-(SP) ;CLR SELECT BITS
          000602
                    012767
                              160000
                                        176422
                                                            MOV.
                                                                                                             :SET-SEARCH-MODE
     183
          000610
                    012746
                              000360
                                                            MOV.
                                                                                                   CLEAR DRIVE AND PULSE
                                                                      #<Q$LBD+Q$LBP>,(SP)
     184
          000614
                    052716
                              001001
                                                            BIS
                                                                                                   :CLEAR PPS AND CP NO-CLOCKS
          000620
                    052716
                                                                      #<Q$CNC+Q$RNC>,(SP)
     185
                              036000
                                                            BIS
          000624
                                                            CLR
                                                                      -(SP)
                                                                                                   :SET NOTHING
     187
          000626
                                                            CALL
                                                                      CSR 1
                                                                                                    #RE-WRITE CSR1
     188
                                                            IF STARTING FROM ZERO, SEND THE BCL ADDRESS OVER TO THE CP.
     189
      190
     191
          000632
000634
                                                                                                    :START-FROM-ZERO-?
     192
                    005701
                                                            TST
                                                                      R1
                    001026
                                                                                                    :WORD · NOT · ZERO ·
:SET · ATTN · CODE · = · 1
     193
                                                            BHE
                                                                      1$
          000636
                    012767
                              999991
                                        176424
                                                            MOV
                                                                      #Q$BCL,QR$LBR
                                                                      #<Q$ATTN+Q$SM+Q$ENOP>,QR$CR2:;SET-ATTN-CODE-READY
QR$CR2,R1 ;READ-CSR2
      195
          000644
                              120100
                                        176422
                                                            MOV
                                                                                                   #READ CSR2
#IS ATTN BIT CLEAR
#NO LOOP UNTIL IT IS
                                                            MOV
                    016701
     196
          000652
                              176422
                                                  115:
                    032701
                                                            BIT
     197
          000656
                              000100
                                                                      #Q$ATTH,R1
          000662
                    001373
                                                                      11$
     199
                                                                      #BCL.QR$LBR: :MOVE:BCL:ADDR:TO:LOD:BUS:REG: #<Q$CCCP+Q$SM+Q$ENOP>,QR$CR2::SET:CC:TO:CP:SLAVE:DATA READY
          000664
                    012767
                              000000G · 176424
                                                            MOV
     200
                              120040
     201
          000672
                    012767
                                        176422
                                                            MOM
                                                                                                   ;READ·CSR2
;IS·CC·TO·CP·CLEAR·
;NO; LOOP·UNTIL·IT·IS· ,
     202.000700
                    016701
                               176422
                                                  12$:
                                                            MOV.
                                                                      OR$CR2,R1
     203 000704
                    032701
                              000040
                                                            BIT
                                                                      #Q$CCCP,R1
     204 000710
                    001373
                                                            BNE
                                                                      12$
     205
                                                            PROVIDE FOR INTERRUPT FROM TERMINAL TO RETURN CONTROL TO USER (IN CASE MICROCODE HANGS UP OR RUNS FOREVER).
     206
     282
     208
     209
                                                            THEM:
     210
                                                                                                    :ISSUE-QIO
:WAIT-FOR-
     211 000712
                                                                      HANG2
                                                  15:
     212-000716
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213 214 215 216 217 218 000722 219 000730 221 000734 222 000736 223 224 000742 225 000746 226 000756 RESET-NO-CLOCKS-IN-CSR 1 SET-LOAD-MODE-PRINT MICROPGM ADDRESS GLR : ;GLEAR·NOTHING: ;SET·PPS·AND.CP·NO-CLOCKS ;RE-WRITE·CSR1 ;SEND.0 TO CP·CONTROL·REG 005046 -(SP) 012746 036000 #<Q\$CNC+Q\$RNC>,-(SP) CALL CLR CSR1 005046 -(SP) CPCR CALL :D0:IT: 005067 012767 #SET-LOAD MODE: #RE-ARM-INTERRUPTS: #PRINT-MICROPGM-ADDRESS: #KILL-AST: GLR: MOV: 176422 QR\$CR2. #Q\$REBK,QR\$CR2 001000 176422 226 000754 227 000760 228 000764 CALL CPMP CALL JMP KILL 000000G 000167 CPXX

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0 M1110 27-MAR-80 14:42 PAGE 7
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CPBUG2 -
        230
231
232
                                                                                                                  FREE - RUN -
         233
                                                                                                                  RUN BOTH MRP AND CP
         234
235
                                                                                                                  EG
                                                                                                                           CP>FR-
                                                                                                                            CP>FR · N ·
                                                                                                                   THE 'N' MEANS NOT TO ERASE THE QLB'S SO THAT THEY MAY
         237
238
                                                                                                                  BE LOOKED AT.
         239
         240
                  000770
                                                                                               FR2::
                  000770
000774
         241
                                                                                                                   CALL.
                                                                                                                                     FIND
                                                                                                                                                                                              ;LOOK-FOR-"H" IN-COMMAND-LINE
                                                                                                                                                                                              ;NOT:THERE, ERASE QLB:
;MAKE:SURE IT:IS:AN:"N
         242
                                      103412
                                                                                                                  BCS:
                                                                                                                                     285
         243
                  000776
                                      122711
                                                         000116
                                                                                                                  CMPB
                                                                                                                                      #*H,(R1)
          244
                                                                                                                  BEQ.
                                                                                                                                      10$
                                                                                                                                                                                              OK, CONTINUE
          245
                  001004
                                                                                                                   CALL
                                                                                                                                     ERR12
         246
                  BRIBIA
                                      000167
                                                         000000G
                                                                                                                   TMP .
                                                                                                                                     CPXX
                                                                                                                                                                                               ;BAD · COMMAND
          247
                                      052767
                                                         000000G 000000G 10$:
                   001014
                                                                                                                  BIS
                                                                                                                                      #NEQLB, BASE
                                                                                                                                                                                              :SET-FLAG-FOR-NO-QUB ERASE
          248
                                                                                                                  LOAD PPS MASK REGISTER
DO A MASTER RESET
         249
250
         251
252
                                                                                                                   INITIAL IZE PPS
          253 001022
                                     012746
                                                                                                20$:
                                                                                                                   MOV
                                                         000052
                                                                                                                                      #Q$MR,-(SP)
                                                                                                                                                                                              ; SELECT PPS MASK REGISTER
                   001026
                                                                                                                   CALL
                                                                                                                                     PPCR
         255 001032
256 001036
                                      012746
                                                                                                                   MOV.
                                                                                                                                      #037774,
                                                                                                                                                                                              #WRITE:X:3FFC:
                                                                                                                   CALL
                                                                                                                                     LBPSC
          258 001042
                                      012746
                                                                                                                   MOV-
                                                                                                                                                                                              :CLEAR CSR1
         259
                  001046
                                      012746
                                                         000010
                                                                                                                   MOV.
                                                                                                                                      #Q$RSET,-(SP)
                                                                                                                                                                                               :SET-RESET
          260
                   001052
                                                                                                                  CALL
                                                                                                                                     CSR1
                                                                                                                                                                                               : RESET-HOR
                                                                                                                                      #Q$RSET,-(SP)
          261
                  001056
                                      012746
                                                         000010
                                                                                                                   MoV
                                                                                                                                                                                               :CLEAR · RESET
                                                                                                                  MOW.
         262.001062
                                      012746
                                                         176000
                                                                                                                                      #<Q$MNC+Q$CNC+Q$RNC>,
                                                                                                                                                                                         -(SP);SET-NO-CLKS
         263 001066
                                                                                                                  CALL
                                                                                                                                     CSR4
                                                                                                                                                                                               ; MOVE - TO - CSR 1
          264
          265
                   001072
                                                                                                                                     PPINIT.
                                                                                                                  CALL
                                                                                                                                                                                              ; INITIALIZE · PPS
          266
          267
                                                                                                                   SET-MRP-AND-CP-START-ADDRESSES-TO-ZERO-
          268
          269 001076
                                                                                                                                                                                               :START-MRP AT-ZERO
         270 001100
271
                                                                                                                   CALL
                                                                                                                                      SEQMM
                                                                                                                                                                                               ;SET START ADDRESS
          272-001104
                                                                                                                   CLR
                                                                                                                                                                                               :REINHIBIT BRANCH CONTROL REGISTER
          273 001106
                                                                                                                   CALL
                                                                                                                                      MRPCR
         274
          275 001112
                                                                                                                   CLR.
                                                                                                                                        (SP)
                                                                                                                                                                                               :START-CP-AT-ZERO-
                                      005046
         276 001114
277
                                                                                                                   CALL
                                                                                                                                      SEQCS
                                                                                                                                                                                               :SEQUENCE ONLY UP TO START ADDRESS
         278 001120
                                                                                                                   CLR:
                                                                                                                                      -(SP)
                                      005046
                                                                                                                                                                                               ; REINHIBIT BRANCH CONTROL REGISTER:
          279 001122
                                                                                                                  SET-UP-FOR-OPERATIONAL INTERRUPTS.
*OPERATIONAL INTERRUPTS* ARE-HIT BUFFER-INTERRUPTS. AND DMA-INTERRUPTS.
          281
         282
         283
                                                                                                                   CLEAR · HIT · BUFFER
         285
                                                                                                                                      #KQ$CHB+Q$CHRL>,QR$CR2. ;CLEAR.OPERATIONAL INTERRUPTS
         286 001126
                                                        равера
                                                                                                                  MOV-
                                   012767
                                                                            176422
                                                                              176422 M0V #Кырыны тырыпы и мирипы и м
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CPBUG2 MACRO M1110 27-MAR-80 14:42 PAGE 7-1
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    287 001134 012767
                            001000' 176422
                                                                  #Q$REBK,QR$CR2
                                                                                              :RE-ARM. INTERRUPTS.
    288
         001142
                  012700
                            000000G
                                                                                              :POINT TO HIT BUFFER
                                                                                              MOV:
                                                                  #HLB.R0
    290 001146
                  016701
                            000000G
                                                        MOV.
                                                                  BCL,R1
    291 001152
292 001154
                  005020
                                                         CLR
                                                                  (RØ)+
                  005301
                                                        DEC
                                                                  R1
                  001375
                                                        BHE
    294
                                                        IF A-BREAKPOINT-IS-IN-EFFECT, BRANCH-TO-CODE-THAT-PREPARES TO FIELD-A-BREAKPOINT-INTERRUPT, ELSE-START-FREE-RUN WITHOUT
    295
    296
    297
                                                        BREAKPOINTS.
    298
    299
         001160
                  032767
                                                                                              :ANY-BREAKPOINTS-SET
:YES, SET-UP-FOR-BREAKPOINT-
                            000000G · 000000G
                                                                  #BREAK,BASE.
         001166
                  001073
                                                        BNF
                                                                  CBK2
                  012767
    301
         001170
                            120000
                                                                  #<Q$SM+Q$ENOP>;QR$CR2.
#<Q$CSEL>,-(SP)
                                     176422
                                                        MOV
                                                                                              :ENABLE · OPERATIONAL · INTERRUPTS
                  012746
052716
052716
    302.001176
                            000360
                                                        MOV
                                                                                              :CLR·SELECT·BITS·
    303 001202
                            001001
                                                        BIS
                                                                  #<Q$LBD+Q$LBP>,(SP)
                                                                                              CLEAR DRIVE AND PULSE CLEAR NO-CLOCKS
    304 001206
                            176000
                                                        BIS
                                                                  #<Q$NCLK>.(SP)
    305
         001212
                  005046
                                                        CLR -
                                                                  -(SP)
                                                                                              ; SET · NOTHING ·
    306 001214
307
                                                                  CSR1
                                                                                              :RE-WRITE CSR1
                                                        SEND ATTENTION CODE AND BCL ADDRESS
    309
    310 001220
311 001226
                  012767
                                                                  000001
                                     176424
                                                        MOV
    311
                  012767
                            120100
                                    176422
                                                        MOV
    312-001234
                  016701
                            176422
                                               115:
                                                        MOV
                                                                  ORSOR2.R1
                                                                                              ;READ CSR2
    313 001240
                  032701
                            000100
                                                                                              ;IS:ATTN:BIT:CLEAR:
;NO, LOOP:UNTIL:CLEAR:
                                                        BIT.
                                                                  #Q$ATTN,R1
    314 001244
                  001373
                                                                  #BCL.QR$LBR. ;MOVE.BCL.ADDR.TO.LOD.BUS.REG.; THE #KQBCCCP+QBSM+Q$ENOP>.QR$CR2.;SET.CC.TO.CP.SLAVE.DATA.READY.
    316 001246
                  012767
                            000000G-176424
                                                        MOV.
        001254
    317
                  012767
                            120040 176422
                                                        MOV.
    318 001262
                  016701
                            176422
                                               12$:
                                                        MOV-
                                                                  QR$CR2,R1
                                                                                              :READ CSR2
        001266
                  032701
                            000040
                                                        RIT
                                                                  #Q$CCCP.R1
                                                                                              : IS-CC-TO-CP-CLEAR
    320 001272
                  001373
                                                        BHE
                                                                  12$
                                                                                              :NO, LOOP UNTIL CLEAR
    321
                                                        PROVIDE FOR INTERRUPT FROM TERMINAL TO RETURN CONTROL TO USER (IN CASE MICROCODE HANGS UP OR RUNS FOREVER.)
CALL SUBROUTINE THAT WAITS FOR INTERRUPTS THEM DECODES
    322
    323
    324
    325
    326
    327 001274
                                                        GLEF$S: #EFN.4
                                                                                              :CLEAR . QIO EVENT . FLAG
    329 001306
                                                                                              ;ISSUE-QIO TO-TERMINAL
;WAIT-FOR-EVENTS-
;KILL-QIO-
                                                        GALL:
                                                                  HANG2 -
    330 001312
    331 001316
                                                        CALL:
                                                                 KILL
    333
334
                                                        TURN OFF CLOCKS, SET LOAD MODE, PRINT MICROPGM ADDRESS
    335 001322-
                  005046
                                                                  -(SP)
                                                        CLR.
                                                                                              : GLEAR - NOTHING
    336 001324
                  012746
                            176000
                                                        MOV.
                                                                  #<Q$NCLK>,-(SP)
                                                                                              ;SET.NO-CLOCKS
;WRITE.CSR 1
    337 001330
                                                                 CSR1
    338 001334
                  005046
                                                                                              SET CP CONTROL REG TO ZERO
                                                        CLR.
                                                                  -(SP)
    339 001336
                                                                 CPCR
                                                        CALL
                                                                                              :D0 - IT-
                                                                                           340 001342 005067
                           176422
                                                        CLR -
                                                                 QR$CR2
    341 001346
                                                        CALL
                                                                  CPMP
    342.001352
                  000167
                           000000G
                                                        JMP.
                                                                 CPXX
    343
```

```
0 M1110 27-MAR-80 14 Approved For Release 2005/07/1 LA-RDP85-00514R000200020001-3
CPBUG2 - M
     344
     345
                                                           EXPECT. TO HIT A BREAKPOINT.
     346
     347 001356
                                                 ČBK2:
                                                           CLEF$S: #EFN.3
                                                                                                  CLEAR BREAKPOINT EVENT FLAG
     348 001356
     349
     350 001370
                                                           CLEF$S: #EFN.4
                                                                                                  :CLEAR QIO EVENT FLAG
     35.1
                                                           SET-BKPT-ALLOW-BIT-IN-CP-CONTROL REG
     352
                                                           SET-SEARCH-MODE.
SET-FREE-RUN CLOCK-
     353
     354
355
          001402
                                                           MOV
                                                                      #CBKALLOW,-(SP)
                                                                                                   ;SET-CP-CONTROL-BIT
                                                                                                   ; WRITE CP CONTROL WORD ...
$CR2 :SET SEARCH MODE
     357
         001406
                                                           CALL
                                                                     CPCR
                                                                     #<Q$SM+Q$EHBK+Q$ENOP>,QR$CR2
#<Q$CSEL>,-(SP) ;CLR
                    012767
                              160000
                                       176422
                                                           MOV
     358
         001412
                                                                                                   ;CLR · SELECT · BITS ·
         001420
                    012746
                              000360
                                                           MOV
     359
          001424
                    052716
                                                           BIS
                                                                     #<Q$LBD+Q$LBP>.(SP)
                                                                                                   CLEAR DRIVE AND PULSE FW
                                                                                                   :CLEAR · NO-CLOCKS
     361 001430
                    852716
                              176000
                                                           BIS
                                                                     #<Q$NCLK>,(SP)
                                                           CLR
                                                                      -(SP)
                                                                                                   :SET - NOTHING -
                                                                                                                                          FW.
     362 001434
                    995946
                                                                     CSR1
                                                                                                   ; RE-WRITE · CSR1
                                                                                                                                          FΨ
     363
         001436
     364
                                                           SEND BCL ADDRESS TO CP.
     365
     366
          001442
                    012767
                              000001
                                        176424
                                                           MOV.
                                                                     #Q$BCL,QR$LBR
                                                                                                   ;SET-ATTN-CODE-=-1
                                                                     *<Q$ATTN+Q$ENBK+Q$ENBK+Q$ENDP>,QR$CR2 ;SET ATTN-CODE-READY
QR$CR2.R1 ;READ-CSR2
                                       176422
     368 001450
                    012767
                              160100
                                                           MOV:
     369 001456
370 001462
                              176422
                                                  115:
                                                           MOV.
                    016701
                    032701
                                                                                                   ; IS ATTH BIT CLEAR
                              000100
                                                           RIT
                                                                     #O$ATTH,R1
                    001373
                                                                                                   ;NO, LOOP-UNTIL-CLEAR-
          001466
     372
                                                                                                   : MOVE - BCL - ADDR - TO - LOD - BUS - REG -
     373 001470
                              000000G-176424
                                                           MOV:
                                                                     #BCL,QR$LBR
                    012767
     374 00147E
                    012767
                              160040
                                                           MOV
                                                                     #<Q$CCCP+Q$SM+Q$ENBK+Q$ENOP>,QR$CR2:;SET:CC:TO:CP:SLAVE:DATA:READY:
                                       176422
                                                                                                   :READ.CSR2
:IS.CC.TO.CP.CLEAR
                              176422
                                                  12$:
                                                           MOV.
                                                                     QR$CR2,R1
          001504
                    016701
     376 001510
                    032701
                              000040
                                                           BIT.
                                                                     #Q$CCCP,R1
                                                                                                   :NO. LOOP UNTIL CLEAR
          001514
                    001373
                                                           BNE
                                                                     12$
     378
                                                           PROVIDE FOR INTERRUPT FROM TERMINAL TO RETURN CONTROLS TO USER (IN CASE MICROCODE HANGS UP OR RUNS FOREVER, \Upsilon CALL SUBROUTINE THAT WAITS FOR INTERRUPTS THEM DECODES
     379
     380
     381
                                                            THEM:
     382
     383
                                                                                                   :KILL:010:
:WAIT:FOR:INTERRUPTS
      384 001516
                                                           GALL
                                                                     HANG2
     385 001522
                                                           CALL:
                                                                     WINT
      386
                                                           RESET-NO-CLOCKS IN-CSR 1
      387
                                                           SET·LOAD·MODE·
PRINT·MICROPGM·ADDRESS
      388
     389
390
          001526
                                                           CLR
                                                                      -(SP)
                                                                                                   : CLEAR - NOTHING
                                                                                                   ;SET·NO-CLOCKS·
;RE-WRITE·CSR1
      392-001530
                    012746
                              176000
                                                           MOV:
                                                                      #<Q$NCLK>,-(SP)
                                                            CALL
                                                                     CSR1
      393
          001534
                                                                                                   SEND 0 TO CP CONTROL REG
          001540
                                                            CLR
                                                                      -(SP)
                                                                                                                             23,04
      395
          001542
                                                           CALL
                                                                     CPCR
                                                                                                   :DO:IT:
     396
                                                            CLR
                                                                      QR$GR2
                                                                                                   :SET-LOAD-MODE
          001546
                    005067
                              176422
                                                                                                   :RE-ARM INTERRUPTS
:PRINT MICROPGM ADDRESS
     398 001552
                    012767
                              001000
                                        176422
                                                           MOV.
                                                                      #Q$REBK,QR$CR2
                                                                     CPMP
                                                           CALL
     399 001560
     400 001564
                                                            CALL
                                         Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-37
```

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401 001570 000167 000000G····

JMP···· CPXX

```
CPBUG2 - M
                 10-M1110 27-MAR-80 14:42 PAGE-8
                                              Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
     403
     494
     465
                                                                    WAIT FOR INTERRUPTS
                                                                    NB. DO:NOT:USE: WTSE$S' OR: WTLO$S'. THEY:CAUSE:SYSTEM:PROBLEMS
     406
                                                                    IN CONNECTION WITH THE WAY INTERRUPTS ARE HANDLED (SEE THE *BPTISE SUBROUTINE IN QMAIN).
     497
     408
     409
     410
     411 001574
                                                        MINT:
     412.001574
                                                        1005:
                                                                    RDAF$S: #EFBUF:
                                                                                                                 ; READ · EVENT · FLAGS ·
     413
     414 001606 032767
                                  000014 000000G
                                                                               #<BIT3+BIT2>,EFBUF
                                                                                                                 :ANY-INTERRUPTS
     415 001614
                      -301767
                                                                    BEQ
                                                                               100$
                                                                                                                 :NO, READ AGAIN
     416
                                                                    INTERRUPT DETECTED. DECODE IT.

NB. EVENT-FLAGS NUMBERS BEGIN WITH 1. BIT NUMBERS IN THE EVENT FLAG BUFFER BEGIN WITH 0.
     417
     418
      419
      420
                                                                    IF THE INTERRUPT IS FROM THE TERMINAL, IMMEDIATELY
      421
                                                                    EXIT: THIS: SUBROUTINE.
      422
      423 001616
                      832767
                                  000010 000000G
                                                                    BIT.
                                                                               #BIT3.EFBUF
                                                                                                                 :EF.#4 = · INTERRUPT · FROM · TERMINAL
      424 001624
                      001402
                                                                    BEQ
                                                                               10$
                                                                                                                 :NO
           001626
                      000167
                                                                    JMP.
                                                                               WINTX2
                                                                                                                 :EXIT-IF-TRUE
      426
      427
                                                                    READ CSR2. CSR2 INCLUDES THE INTERRUPT FLAGS.
      428
           001632
                      016767
                                  176422
                                             000000G-10$:
                                                                    MOV.
                                                                               QR$CR2,APLACE
                                                                                                                 :READ · CSR · #2 ·
      430 001640
                                                                    BIC
                                                                               #177770.APLACE
                                                                                                                 :MASK-OFF-INTERRUPT-BITS
      431
      432
      433
                                                                    CHECK-FOR-GP BREAKPOINT-INTERRUPT.
                                                                    BECAUSE BREAKPOINT INTERRUPTS ARE OF THE HIGHEST PRIORITY.
      434
                                                                    CHECK: TO: SEE WHETHER: A HIT-LIST: OR: HRL: INTERRUPT: IS: PENDING.
THIS: WILL: ONLY: HAPPEN: WHEN: IN THE: MICROCODE: A: BREAKPOINT
      435
      436
      437
                                                                   HALT-IMMEDIATELY-FOLLOWS-AN-HL-OR-HRL-INTERRUPT-(*CPBUGZ: WILL-SEE-THEM-IN-REVERSE-ORDER).
      438
      439
      440
                                                                    DMA INTERRUPTS WILL GO UNREPORTED UNDER THESE CIRCUMSTANCES.
      441
      442
     443
                                                                    TELL - WHETHER A - HIT - BUFFER - INTERRUPT - IS - PENDING - BY - LOOK ING.
      444
                                                                    AT THE BCL FOR A CLEARED ENTRY.
      445
           001646
                                                                                                                :CP-BREAKPOINT-INTERRUPT-
:NO. CHECK OTHERS-
      446
                      122767
                                  000006
                                            000000G
                                                                    CMPB
                                                                               #Q$ICP,APLACE
      447
           001654
                      001060
                                                                    BNE -
                                                                               OTHERS:
           001656
      448
                       005767
                                  000002G
                                                                    TST
                                                                               BCL+2
                                                                                                                 :HIT-BUFFER-BCL-ENTRY-CLEARED
      449 001662
                      001025
                                                                               2$
                                                                                                                 :NO. TEST-HRL:
     450 001664
                      312767
                                  101000
                                             176422
                                                                    MGV.
                                                                               #<Q$SM+Q$REBK>.QR$CR2
                                                                                                                 :RE-ARM INTERRUPTS
      451
           001672
                      012767
                                  120000
                                             176422
                                                                    MOV-
                                                                               #<Q$SM+Q$ENOP>,QR$CR2
                                                                                                                 :ENABLE OPERATIONAL INTERRUPTS
           001700
                      012767
                                                                               ##
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                                  100600
                                             176422
                                                                    MOV
                                  000000G 000002G
      453
           001706
                      012767
                                                                    MOV
     454 001714
                      012700
                                 000012
                                                                    MOV:
     455 001720
                      012705
                                 000000G
                                                                    MOV
                                                                               #PRINT, R5
                                                                                                                 : POINT - TO - PRINT - LINE
     456
          001724
                      112025
                                                        1$:
                                                                    MOVB
                                                                               (R0)+,(R5)+
     457
          001726
                      001376
                                                                   BNE -
                                                                               1$
     458 001730
                                                                               CONSOL -
                                                                    CALL
                                                                                                                 : PRINT-MESSAGE
                      000541
     459 001734
                                              Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
```

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         460
         461
                                                                                                            \label{eq:check-whether-an-hrl-entry-is-pending-by-looking-for-a-cleared-bcl-entry;}
         462
         463
         464 001736
465 001742
                                    385767
                                                                                                             TST
                                                      000012G
                                                                                          2$:
                                                                                                                              BCL+10.
                                                                                                                                                                                    :HRL - BCL - ENTRY - CLEARED -
                                    001136
                                                                                                             BME
                                                                                                                               WINTX-
                                                                                                                                                                                     :NO, EXIT
         466
467
                 001744
                                                                                                                              #<Q$SM+Q$REBK>,QR$CR2
#<Q$SM+Q$ENOP>,QR$CR2
                                    012767
                                                       101000
                                                                         176422
                                                                                                             MOV
                                                                                                                                                                                    :RE-ARM-INTERRUPTS-
                                                                                                                              #<Qs$M+Q$ENDP>,QR$CR2 ;ENABLE.OPERATIONAL.INTERRUPTS
#<Qs$M+Q$CHB+Q$CHRL>,QR$CR2.;CLEAR_OPERATIONAL.INTERRUPTS.
                  881752
                                                                        176422
176422
                                    912767
                                                       120000
                                                                                                             MOV
                  001760
                                    012767
                                                       100600
                                                                                                             MOV
         469
                 001766
                                    012767
                                                      000000G-000012G
                                                                                                             MOV
                                                                                                                               #HRL.BCL+10.
                                                                                                                                                                                    ;RESTORE BCL ENTRY:
;POINT TO HIT LIST MESSAGE:
;POINT TO PRINT LINE
         470
                 001774
                                    012700
012705
112025
                                                      0000421
                                                                                                             MOV
                                                                                                                               #HRLMSG, RØ
         471
                  002000
                                                      000000G
                                                                                                             MOV
                                                                                                                               #PRINT, R5
         472
                  002004
                                                                                                                               (R0)+,(R5)+
                                                                                          3$:
                                                                                                             MOVB
         473
                 002006
                                    001376
                                                                                                            BNE -
                                                                                                                               3生
         474 002010
                                                                                                             CALL
                                                                                                                              CONSOL
                                                                                                                                                                                    :PRINT-MESSAGE:
;LEAVE-INTERRUPT-ROUTINE
         475
                 002014
                                    000511
                                                                                                                               WINTX-
         477
                                                                                                                                                                                    The second secon
         478
                                                                                                            GHECK-FOR-MRP-INTERRUPT-
         479
         480
                 002016
                                    122767
                                                      000007
                                                                       000000G OTHERS: CMPB
                                                                                                                               #Q$IMRP.APLACE
                                                                                                                                                                                    :MRP - BREAKPOINT - ? -
                  002024
                                    001003
         481
                                                                                                            BNF .
                                                                                                                              1$
                                                                                                                                                                                    :NO, TRY NEXT:
:R0 -> MESSAGE
:PRINT MESSAGE
         482 - 002026
                                    012700
                                                                                                                              #MRPMSG,RØ
                                                      0000000
                                                                                                            MOV
         483
                  002032
                                    000443
                                                                                                                              PMSG
         484
         485
                                                                                                            CHECK FOR HIT BUFFER INTERRUPT
         486
         487
                  002034
                                    122767
                                                      000003
                                                                        000000G-1$:
                                                                                                            CMPB
                                                                                                                               #Q$IHB,APLACE
                                                                                                                                                                                    #HIT-LIST-INTERRUPT-
#NO, TRY-NEXT-
         488
                  002042
                                    001011
                                                                                                            BHF
                                                                                                                              2$
         489
                  002044
                                    012767
                                                      100400
                                                                        176422
                                                                                                                              #<Q$SM+Q$CHB>,QR$CR2.
                                                                                                            MOV
                                                                                                                                                                                    ;CLEAR.HL.INTERRUPT.
                                    012767
012700
         490
                 002052
                                                      000000G · 000002G
                                                                                                            MOV
                                                                                                                              #HLB,BCL+2.
                                                                                                                                                                                    :PUT-BUFFER ADDRESS BACK-IN-BCL
:POINT-TO-HIT-LIST-MESSAGE
:PRINT-MESSAGE
         491
                 002060
                                                      000017
                                                                                                            MOV
                                                                                                                               #HBMSG,R0
                 002064
         492
                                    000426
                                                                                                            BR
                                                                                                                              PMSG
         493
                                                                                                            GHECK-FOR-HRL-INTERRUPT-
         494
         495
         496
                  002066
                                    122767
                                                      000002
                                                                        000000G · 2$:
                                                                                                            CMPB
                                                                                                                               #Q$IHRL,APLACE
                                                                                                                                                                                    :HRL INTERRUPT
         497
                  002074
                                    001011
                                                                                                            BNE -
                                                                                                                              3$
                                                                                                                                                                                    ;NO, TRY-NEXT
         498
                 002076
                                    012767
                                                      100200
                                                                         176422
                                                                                                            MOV
                                                                                                                              #<Q$SM+Q$CHRL>,QR$CR2
                                                                                                                                                                                    CLEAR HRL INTERRUPT
PUT BUFFER ADDRESS BACK IN BCL
         499
                 002104
                                    012767
                                                      000000G-000012G
                                                                                                                              #HRL,BCL+10.
         500
                 002112
                                    012700
                                                      0000421
                                                                                                            MOV
                                                                                                                              #HRLMSG,RØ
                                                                                                                                                                                    : POINT - TO - HRL - MESSAGE -
         501 002116
                                    000411
                                                                                                                              PMSG
         502
                                                                                                            CHECK-FOR-DMA-INTERRUPT-NB. DMA-USES HIT-BUFFER-INTERRUPT-REQUEST-FROM-CP (SEE-CP-MICROCODE).
         503
         504
         505
         506
         507
                  002120
                                    122767
                                                      000001
                                                                       000000G.3$:
                                                                                                            CMPB
                                                                                                                               #Q$DMA,APLACE.
                                                                                                                                                                                    :DMA: 2
                 002126
                                    001030
                                                                                                            BNF
                                                                                                                              UHID
         509 002130
510 002136
                                    012767
                                                      100400
                                                                                                                              #<Q$SM+Q$CHB>,QR$CR2
                                                                                                            MOV
                                                                                                                                                                                    ;CLEAR-DMA INTERRUPT (USING-HIT-BUF-FLAG);POINT-TO-DMA-MESSAGE-
                                    012700
                                                      000060
                                                                                                                              #DMAMSG,R0
         511
        512
513
                                                                                                            PRINT MESSAGE, CLEAR INTERRUPT FLAG, WAIT FOR NEXT INTERRUPT.
        514 002142
515 002146
516 00<u>2</u>150
                                                                                                                                                                                     PUNT TO PRINT LINE
                                   012705
                                                     000000G
                                                                                          PMSG:
                                                                                                            MOV.
                                                                                                                               #PRINT,R5
                                    112025
                                                                                                            MOVE
                                                                                          3$:
                                                                                                                              (R0)+.(R5)+
                                   001376
                                                                                                            BNE
                                                                          Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
```

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517 002152				GALL	CONSOL.	;WRITE:MESSAGE:TO:TERMINAL:
518 519 002156	002170 012767 002176 012767	101000 176422- 160000 176422- 177364		GLEF\$S∙	#EFN.3	;CLEAR HOR INTERRUPT.EVENT/FEAG
520 521 002170 522 002176 523 002204				MOV: MOV: JMP:	# <q\$sm+q\$rebk>,QR\$CR2- #<q\$sm+q\$enbk+q\$enop>,QI WINT</q\$sm+q\$enbk+q\$enop></q\$sm+q\$rebk>	;RE+ARM·INTERRUPTS∜. \$\$CR2∙;ENABLE·INTERRUPTS ;WAIT·FOR·NEXT·INTERRUPT
524 525				UHIDEHT	IFIED INTERRUPT	
526 527 002210 528 002214 529 002220 530 002222	012700 012705 112025 001376	000076* 000000G	; UNID: 5\$:	MOV: MOV: MOVB BNE:	#UNMSG,R0 #PRINT,R5 (R0)+,(R5)+ 5\$:POINT-TO-MESSAGE- :POINT-TO-PRINT-LINE
530 002222 531 002224 532 002230 533 002234	015701	000000G		MOV. CALL. CALL.	APLACE.R1 UNPK CONSOL	;LOAD CSR2 INTO R1 ;CONVERT TO ASCII HEX ;WRITE MESSAGE TO TERMINAL
534 535 536			; ; WINTX:	EXIT:		
537 002240 538 002240 539			2	CLEF\$S.	#EFN.3	;CLEAR HOR INTERRUPT EVENT FLAG
540 002252			MINTX2:	RETHRN.		

```
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                                                                    Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
       542 - 543
544
545
546
547 002254
548 002254
549 002260
550 002270
551 002270
                                                                                                    PRINT-CP-MICROPROGRAM-ADDRESS-
                                                                                    CPMP:
                                                                                                                                                                      :READ MPA SELECT BIT
:WRITE CP CONTROL REGISTER:
:REQUEST CP TO LOD BUS
:UNLOAD MPA:
:CLEAR UPPER 6 BITS
:POINT TO PRINT LINE
:CONVERT MPA *
:WRITE TO CONSOLE
:CLEAR CP CR
                                                                                                                     #<CSADRD>.-(SP)
CPCR
CPLB
                                 612746
                                                  000004
                                                                                                    MOV-
                                                                                                    CALL
                                                                                                    CALL
MOV
                                                                                                                     (SP)+,R1
#176000.R1
       551 002270

552 002275

553 002276

554 002302

555 002306

556 002312

557 002314

558 002320
                                                                                                   MOV.
MOV.
CALL
CALL
                                 042701
                                                  176000
                                 012705
                                                  000000G
                                                                                                                     #PRINT.R5
                                                                                                                     UNPK
CONSOL
                                 005046
                                                                                                                     -(SP)
                                                                                                    CALL
RETURN
                                                                                                                     CPCR
```

```
CPBUG2 - M
                        27-MAR-80 14:42 PAGE 10
              0 · M1110
                                       Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
    560
561
    562
                                                         INITIALIZE PPS
    563
    564
                                                         SET-HP-QUIESCENT.
    565
    566
    567
         002322
                                               PPINIT:
    568
569
         002322
002326
                   012746
                            000053
                                                         MOV-
                                                                   #Q$QLA,-(SP)
                                                                                               ; ADDRESS - SELECT - FOR - QLB - PAGES
                                                         CALL
                                                                  PPCR
     570
         002332
                  012746
                            002000
                                                                  #2000,-(SP)
                                                         MOV-
                                                                                               ;SEND-ADDRESS-X'400' (ILLEGAL)
    570 002336
571 002336
572-
573
574
575 002342
                                                         CALL
                                                         RESET - MRP - AND - CP -
         002342
                   005046
                                                                   -(SP)
                                                                                               :CLEAR : NOTHING : IN : CSR1
    576
577
         992344
                   012746
                            999994
                                                         MOV-
                                                                  #Q$MSET,-(SP)
                                                                                               :SET-RESET
         002350
                                                         CALL
                                                                  CSR1
         002354
                            000004
                                                         MOV.
                   012746
                                                                  #0$MSFT,-(SP)
                                                                                               ;CLEAR RESET:
    579 002360
580 002362
                   005046
                                                         CLR
                                                         CALL
                                                                  CSR1
     581
    582 002366
                   005046
                                                         GLR
                                                                   -(SP)
                                                                                               :CLEAR·NOTHING·IN·CSR1
:SET·RESET
    583 002370
584 002374
                   012746
                            000002
                                                         MOV
                                                                  #Q$CSET,-(SP)
                                                         CALL
                                                                  CSR1
     585 002400
                   012746
                            000002
                                                         MOV.
                                                                  #Q$CSET,-(SP)
                                                                                               :CLEAR RESET
     586
         002404
                   005046
                                                         CLR.
                                                                   -(SP)
                                                                                               :SET - NOTHING
     587
588
         002406
                                                         CALL
     589
                                                         SET-10LB-ERASE:
     590
     591
         002412
                   032767
                            000000G · 000000G
                                                                  #NEQLB, BASE
                                                                                               :NO.ERASE.FOR.QLB.?.
     592-002420
                   001406
042767
                                                         BEQ
                                                                                               :ERASE OLB
     593
         002422
                            000000G · 000000G
                                                                  #NEQLB, BASE
                                                         BIC
                                                                                               :CLEAR NO ERASE FLAG
         002430
                   012746
                                                         MOV.
                                                                  #300,-(SP)
                                                                                               :SET.CODE. = . X1C01
     595 002434
596
                   000402
     597
         002436
                   012746
                            000100
                                               1$:
                                                         MOV.
                                                                  #100,-(SP)
                                                                                               ;SEND.X1401 TO.PPCR
     598 002442
                                               2$:
                                                         CALL
                                                                  PPCR
     599 002446
                                                         RETURN.
    600
                   000001
    601
                                                         .END
```

```
CPBUG2 MACRO M1110 27-MAR-80 14:42 PAGE 10-1
Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
                                                             BYTE9 = 000011
                                                                                            LBPP: =: ****** GX:
                                                                                                                          O$FC
                                                                                                                                  = 000045
                              BYTE38= 000046
ALUCKE = . 040000
                                                             BYTE90= 000132
                                                                                            LBPSC - ****** GX
                              BYTE39= 000047
                                                                                                                          Q$F0
                                                                                                                                  = 000044
ALUGE: =:004000
APLACE = · *******
                               BYTE4 = 000004
                                                             BYTE91=-000133
                                                                                            LOC.EN= 000100
                                                                                                                          Q$FP.
                                                                                                                                  = 000046
                                                                                                                          O⊈HBE
                              BYTE40= 000050
BYTE41= 000051
                                                             BYTE92= 000134
                                                                                            LOC.WA= 040000
       = 010000
                                                                                                                                  - 0000002
                                                             BYTE93 = . 000135
                                                                                            LOC.WB= 100000
                                                                                                                          Q$ICP - 0000006
      = · ***** GX
BASE -
                              BYTE42 = . 000052
                                                             BYTE94= 000136
                                                                                            MAREN1 = . 000001
                                                                                                                           Q$IHB = 000003
       = · ****** GX
BOL -
                                                             BYTE95=-000137
BYTE96=-000140
BYTE97=-000141
                               BYTE43= 000053
                                                                                            MAREN2=-004000
                                                                                                                          Q$IHRL= 000002
BINUD = * ****** GX
                                                                                            MARLOD= 010000
MAROUT= 000002
                                                                                                                          Q$IMRP= 000007
BITVAL = . 000000
                              BYTE44= · 000054
                              BYTE45= 0000055
                                                                                                                          Q$LBD = 001000
BIT0
      = .000001
                                                                                      MAR.LO = 000000
MAR.LO = 000000
MAR.OU = 000040
MBKALL = 001000
                               BYTE46=-000056
                                                             BYTE98= 000142
                                                                                                                           Q$LBDP= 001001
       = 0000002
BIT1
                                                                                                                          Q$LBP. ~ . 000001
BITIO
                               BYTE47 = . 000057
                                                             BYTE99=-000143
                                                                                                                          Q$LDCD= 000003
                                                             BYTVAL= 000144
BIT11
       = 004000
                               BYTE48 = . 000060
BIT12 -- 010000
                               BYTE49 = . 000061
                                                             ČBK -
                                                                       000546R
                                                                                                                          Q$LDMD= . 000004
                                                             CBKALL = . 001000
                                                                                            MMADRD = 000100
MMLEFT = 000002
MMOE · = 000004
                                                                                                                          Q$LDPP=.002000
Q$LHP.=.010000
Q$MNC.=.140000
BIT13
                               BYTE5 = 000005
BIT14
       = 040000
                               BYTE50=-000062
                                                             CBKCLK = . 000400
       = 100000
                               BYTE51= 000063
                                                                       001356R
                                                             CBK2 ·
                                                                                       002 · MMOE ·
BIT15
       = 000004
                               BYTE52= 000064
                                                                       000252R
                                                                                       002 · MMWRTE = · 000010
                                                                                                                          Q$MR = 000052
Q$MRP = 000040
                                                             CGO
BIT2.
                                                             CNOBRE = · 100000
CONSOL = · ****** GX
                                                                                            MNOBRE - 100000
MREN1 - 000001
       = -000010
                               BYTE53=-000065
                                                                                                                     Q$FIRF = 000040
Q$FIRP2= 000240
Q$FISE = 04000
Q$FISET = 000004
002 Q$FISET = 100000
BIT4
       ■ 000020
                               BYTE54= 0000066
                               BYTE55= 000067
                                                                                            MREN2 - - 020000
        = 000040
                                                             CPCCEN= 010000
BIT5
                               BYTE56= 000070
                                                             CPCR: =: ****** GX
                                                                                            MRPCR - - ****** GX
BIT6
BIT7
        = .000200
                               BYTE57= 000071
                                                             CPLB: = ******* GX
                                                                                            MRPMSG · 000000R
                                                                                                                           Q$NCLK= 176000
BIT8
        = 000400
                               BYTE58=-000072
                                                             CPMP.
                                                                       002254R
                                                                                       002 MSYH - 000040
                                                                                                                           Q$PP
                                                                                                                                  = -000100
        = .001000
                               BYTE59=-000073
                                                             CPREAD = : 040000
                                                                                                   = .000144
BIT9
                                                                                            N.
                               BYTE6 = 000006
                                                             CPWRTE=-020000
CPXX- =-******** GX
                                                                                            NEQLB := : ****** GX
                                                                                                                           Ű$PPSW= · 000320
BREAK . = . ***** GX .
                                                                                                                          Q$PP2 - 000300
BYTE0 = 000000
                                                             CPXX:
                                                                                            OTHERS: 002016R
                               BYTE60= . 000074
BYTE: = 000001
                               BYTE61= 000075
                                                             CSADRD=-000004
                                                                                            PACK+
                                                                                                   = - жининик БХ
                                                                                                                           0$0HLT= 000013
                                                             CSEQCI = 100000
BYTE10= 000012
BYTE11= 000013
                               BYTE62= 000076
                                                                                            PLB.
                                                                                                   - . 000010
                                                                                                                           0$0L = 000043
                               BYTE63=:000077
                                                             CSHIGH= ****** GX
                                                                                                                           Q$QLA · = · 000053
                                                                                                    = 000020
                                                                                            PLC:
                                                             CSOE - 000040
CSR1 - ****** GX
                               BYTE64= 000100
                                                                                                    = .000030
                                                                                                                           Q$QLB - = - 000054
BYTE12=:000014
                                                                                            PLD
                                                                                                                          Q$QLR·=·000001
Q$QW =·000042
BYTE13= 0000015
                               BYTE65= 000101
                                                             CSR 1
                                                                                            PLRWR - = - 000200
BYTE14= 000016
                               BYTE66=-000102
                                                              CSWRTE = - 000100
                                                                                            PLR.EN= 000200
                                                             DBR.RD= 000001
DB$CPP= 001457
                                                                                                                      002 · Q$RDCD= · 000005
BYTE15= 000017
                               BYTE67 = . 000103
                                                                                            PMSG -
                                                                                                      002142R
                                                                                                                           Q$RDMD= 000006
                                                                                                    = · ***** GX
BYTE16= 000020
BYTE17= 000021
                               BYTE68= 000104
                                                                                            PPCR
                               BYTE69= 000105
BYTE7 = 000007
                                                              DB$SPT= 000026
                                                                                            PPINIT 002322R
                                                                                                                      002.Q$REBK=.001000
                                                                                                                           Q$RNC -= 006000
Q$RSC -= 004000
Q$RSET= 000010
                                                              DB$TPC=-000023
                                                                                            PRINT: = : жижижик GX
BYTE18=-000022
BYTE19= 0000023
                               BYTE70= 000106
                                                             DISPGS=-100000
                                                                                            QR$CR1=:176420
                                                                                            QR$CR2= 176422
BYTE2 - - 000002
                               BYTE71= 000107
                                                             DMAAUR = : 000005
                               BYTE72= 000110
                                                                                                                           Q$SM = .
Q$SP = .
BYTE20= 0000024
                                                              DMAMSG · 000060R
                                                                                       002
                                                                                            QR$LBR= 176424
                                                                                                                                     100000
BYTE21 = 0000025
                               BYTE73= 000111
                                                              DMARRD=-000003
                                                                                            Q$ATTN= .000100
                                                                                                                           Q$SP
                                                                                                                                     000120
                               BYTE74= 000112
                                                                                            Q$BCL -- 000001
Q$CCCP- 000040
                                                                                                                           Q$SP2 - - - 000340
BYTE22= 000026
                                                              DMARWR = . 000004
                                                                                                                           RGQ.EN= 000200
RGQ.VA= 020000
                               BYTE75= 000113
BYTE23= . 000027
                                                              EFBUF - = · ******
BYTE24= 000030
                               BYTE76= 000114
                                                              EFN.3
                                                                        ******
                                                                                            Q$CHB - = - 000400
                               BYTE77= 000115
BYTE78= 000116
                                                                                            Q$CHRL=.000200
Q$CLR.=.000040
 BYTE25= 000031
                                                              EFN:4 = ******** GX
                                                                                                                           SEQCS - *******
                                                                                                                           SEQMM =
                                                              EMBR -
                                                                     = 010000
                                                                                                                                     жжжжж
BYTE26=:000032
BYTE27= 000033
                               BYTE79= 000117
                                                                                            Q$CNC - - 030000
                                                                                                                           SEQ:CI=
                                                              ERR10
                                                                                                                                     000010
 BYTE28 - 000034
                               BYTE8 = 000010
                                                              ERR12 - - - *********** GX
                                                                                            0sCP - - 000060
                                                                                                                           S$CLR - = -
                                                                                                                                     000000
                               BYTE90= 000120
                                                                     = - ********* GX
                                                                                            Q$CPCC= 000010
                                                                                                                                     000001
                                                              ERR5
BYTE29= 0000035
BYTE3 = 000003
                                                                                                                           S$LA
                               BYTE81 = . 000121
                                                                                            Q$CP2 -- 000260
                                                              FIND
                               BYTE82=-000122
BYTE83=-000123
                                                              FR2
                                                                                       002 · Q$CSC · = · 010000
002 · O$CSEL = · 000360
 BYTE30=.000036
                                                                        000770RG
                                                                                                                           S#QR
                                                                                                                                     000006
BYTE31 = . 000037
                                                                        000136RG
                                                              GOD
                                                                                                                           S#0X
                                                                                                                                     . 000004
                                                              HANG2 · = · ******** GX
                                                                                            Q$CSET= 000002
                               BYTE84= 000124
                                                                                                                           S$SR
                                                                                                                                   = 000007
BYTE32 = . 000040
BYTE33=-000041
                               BYTE85 = 000125
                                                              HBMSG -
                                                                       000017R
                                                                                       002 · Q$CSP · = · 020000
                                                                     = ***** GX
                                                                                                                           $2525.₹$000014;
TD$CTR= 176370,
TD$CTW= 176360
BYTE34= 0000042
                               BYTE86 = . 000126
                                                              HLB.
                                                                                           0$DMQ 229001
Q$ENBK= 040000
                                                                      = · ****** GX
BYTE35 = . 000043
                               BYTE87 = . 000127
                                                              HRI
                                                                                       002 · Q$ENOP = · 020000
BYTE36 = . 000044
                               BYTE88 = . 000130
                                                              HRLMSG · 000042R
BYTE37= · Ø
                                         Approved For Release 2005/07/12
                                                                                                                           TD$INL≌:004000
                                                                                   IA-RDP85-00514R000200020001-3
```

```
0 M1110 27-MAR-80 14:42 PAGE 10-2
Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
CPBUG2 M
SYMBOL: TA
                                                              WORD16=-000040
TD$MEM= : 000270
                               T$08F · = · 004000
                                                                                                                            WORD74≕.000224
                                                                                            WORD45=-000132
                               T$0BF - 010000
                                                              WORD17= 0000042
TD$0AR=:176344
                                                                                            WORD46=-000134
                                                                                                                            WORD75=-000226
TD$0TR=-176346
                               T$0BRA= 000034
                                                              WORD18 = 000044
                                                                                             WORD47 = . 000136
                                                                                                                           WORD76= 000230
WORD77= 000232
TD$QRD=-000274
                               T$08WA=.000032
                                                              WORD19=-000046
                                                                                             WORD48=-000140
TD$SW-=-176376
                               T±OHTA = - 100000
                                                              WORD2 - - 000004
                                                                                             WORD49= 000142
                                                                                                                            WORD78= 000234
TD$TAR= 176372
                               T$RBD0= 000200
                                                              WORD20= 0000050
                                                                                             WORD5 = 000012
                                                                                                                            WORD79 = - 000236
TD$TAW= · 176362
                               T$RNB · = · 000040
                                                              WORD21 = 000052
                                                                                             WORD50 - 000144
                                                                                                                           WORD8 = 000020
WORD80= 000240
                               T$RSET= 040000
T$SC = 000022
TD$TDR= · 176374
TD$TDW= · 176364
                                                              WORD22=-000054
                                                                                             WORD51= 000146
                                                              WORD23 = 000056
                                                                                             WORD52= 000150
                                                                                                                           WORD81 = . 000242
T$AD - - 000020
                               T$SCLK=-020000
                                                              WORD24= 000000
                                                                                            WORD53= 000152
WORD54= 000154
                                                                                                                           WORD82= 000244
T$BA · = · 0000002
T$BD · = · 000010
                               T$SEG1 = 000000
                                                              WORD25= 000062
                                                                                                                           WORD83=-000246
                                                             WORD26=-000064
WORD27=-000066
WORD28=-000070
                               T$SEG2= . 0000001
                                                                                             WORD55= 000156
                                                                                                                           WORD84= 000250
T$850 - = · 100000
                               T$SEG3=-000002
                                                                                            WORD56 = 000160
WORD57 = 000162
                                                                                                                           WORD85= 000252
T$BT· = 0000020
                                      - 000001
                                                                                                                           WORD86= 000254
WORD87= 000256
T$BTAR = . 000030
                               T$UBUS= 100000
T$1CLK= 000400
                                                              WORD29=-000072
                                                                                             WORD58= 000164
                                                                                                                           WORDS = 000256
WORDS = 000260
WORDS = 000262
WORDS = 000022
WORDS = 000264
T$BTD - = - 002000
                                                             WORD3 = 000006
WORD30= 000074
                                                                                             WORD59-000166
T$CD - - 000100
                               T$8BEN= 000020
                                                                                             WORD6 = 000014
T$CLK - = - 002000
                                                              WORD31 = 000076
                               UBD.IN= 000020
                                                                                             WORD60=-000170
T$DISK=-000200
T$DRD-=-000004
                               UHID.
                                         003210R
                                                         002·WORD32= 000100
                                                                                             WORD61=-000172
                               UNMSG.
                                         000076R
                                                         002·WORD33=:000102
                                                                                             WORD62= 000174
                                                                                                                           WORD91= 000266
T$EMEM= 010000
                               UNPK = ******* GX
WINT 001574R
                                                         WORD34=-000104
002-WORD35=-000106
                                                                                             WORD63=-000176
                                                                                                                           WORD92=.000270
T$FSAA=.000000
                                         001574R
                                                                                            WORD64= 000200
WORD65= 000202
                                                                                                                           WORD93=.000272
T$F$AB= 000004
                               WINTX-
                                         002240R
                                                         002·WORD36=.000110
                                                                                                                           UNRD94≈ · 000274
T$FSAC= 000014
                                         002252R
                               WINTX2
                                                         002-WORD37=-000112
                                                                                             WORD66= 000204
                                                                                                                           WORD95= 000276
T$FSB2=-000010
                               WORD0 = 000000
                                                             WORD38= 000114
WORD39= 000116
                                                                                            WORD67= 000206
WORD68= 000210
                                                                                                                           WORD96=-000300
T$IB· ≕-000026
                               WORD1 = 000002
                                                                                                                           WORD97=-000302
T$IBAR= 000024
                                                              WORD4 = 000010
                                                                                            WORD69= 000212
WORD7 = 000016
WORD70= 000214
                               WORD10=-000024
                                                                                                                           WORD98 = - 000304
T$IBE - = - 020000
                               WORD:1:-000026
                                                             WORD40 = 000120
WORD41 = 000122
                                                                                                                           WORD99--000306
T$IBF·=·040000
                               WORD12=-000030
                                                                                                                           WRDVAL = . 000310
                               WORD13= 000032
T$ICD - = -000040
                                                              WORD42=-000124
                                                                                            WORD71= 000216
                                                                                                                           XTREAD= : 001000
T$MODE = . 004000
                               WORD14= 000034
                                                              WORD43 = . 000126
                                                                                             WORD72= 000220
                                                                                                                           XTWRTE = . 000400
T$08 - - 000036
                               WORD15= 000036
                                                              WORD44=-000130
                                                                                             WORD73=-000222
 . ABS.
          000000
                        000
          000000
                        001
CPBUG2
          002450
                        002
ERRORS DETECTED: 0
VIRTUAL MEMORY USED:
                            3902 - WORDS -
TYNAMIC MEMORY: 4916 WORDS: (18 PAGES)
ELAPSED TIME: 00:00:58
CPBUG2.CPBUG2/-SP=C20,13IM,C20,13CPBUG2
```

```
R0 M1110 27-MAR-80 14:44 PAGE 5
Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
CPREST- MA
                                                              .FITLE-GRREST-
.PSECT-CPREST-
          000000
       4
       5
                                                              HARDWARE QUERY RESOLVER 'MANUAL' DEBUGGING AIDS
       6
7
                                                              CONTROL PROCESSOR TEST ROUTINES.
                                                              COMMANDS:
                                                              ST
                                                                        STORE INTO AN CP REGISTER
READ FROM A REGISTER
RESET CP
      10
                                                              RE
      i i
                                                              RS
      12
13
                                                              CL
                                                                        CALL HOR LOADER
      14
                                                              ONCE: A: COMMAND: HAS: BEEN: EXECUTED (OR: AN: ERROR: ENCOUNTERED)
THIS: MODULE: RETURNS: CONTROL: TO: THE: MODULE: CP: AT: LOCATION:
"CPXX";
      15
      16
17
      18
19
                                                             STORE.
TABLE: OF: VALID: REGISTER: MNEMONICS: AND: ASSOCIATED: ROUTINE
      20
21
22
23
         000000
                                                   ST2TBL::
      24
         000000
                        103
                                  122
                                                              .ASCII
                                                                        ZCRZ
                                                                                                       ;CP · CONTROL · REG ·
      25
         000002
                    000400
                                                              .WORD
                                                                       ST2CR
      26
         000004
                        102
                                  113
                                                              .ASCII
      27
                                                                                                       :BREAKPOINT REG
         000006
                    000414
                                                              danh.
                                                                       ST2BK
     28
29
         000010
                                  101
                                                              .ASCII
                                                                       ZMAZ
                                                                                                       :MEMORY-ADDRESS-REG
         000012
000014
                    000440'
                                                             .WORD
                                                                       ST2MA
                        120
                                  101
                                                                       /PA/
ST2PA
                                                                                                      :PIPELINE · REG · A · SECT
     31
         000016
                    000530
                                                              .WORD
      32
         000020
000022
                        120
                                  102
                                                             .ASCII
     33
                                                                                                      ; PIPELINE · REG · B · SECT
                    000562
                                                                       ST2PB
         000024
                        129
                                  103
                                                             .ASCII
                                                                        ZPCZ
                                                                                                      ; PIPELINE · REG · C · SECT
     35
         000026
                    000614
                                                              .WORD
                                                                       ST2PC
     36
         000030
                       120
                                  104
                                                              .A3CII
                                                                        /PD/
         000032
                                                                                                      ; PIPELINE · REG · D · SECT
                    0006461
                                                             . WORD
                                                                       ST2PD
         000034
                       104
                                  101
                                                             .ASCII
                                                                        ZDAZ
                                                                                                      ;DMA · ADDRESS · REGISTER
     39
         000036
                    000700
                                                             .WORD
                                                                       ST2DA
     40
         000040
                       104
                                  104
                                                              .ASCII
                                                                        /DD/
                                                                                                      ;DMA·DATA·REGISTER.
     41
         000042
                   000742
                                                             .WORD
                                                                       ST2DD
     42
         000044
                                  060
                                                             .ASCII
                                                                       /R0/
                                                                                                      ;CP-REGISTER-0
     43
         000046
000050
                   001100
                                                             .WORD
.ASCII
                                                                       ST2R0
     44
                                  06 i
                                                                       /R1/
ST2R1
     45
         000052
                   001074
                                                             .WORD.
     46
47
         000054
                                 .062
        000056
000060
                   001070
                                                             .WJRD
                                                                       ST2R2
     48
                                  063
                                                             .ASCII-
                                                                       ZR3Z
         000062
                   001064
                                                             .WORD
                                                                       ST2R3
     50
         000064
                                 964
                                                                       /R4/
        000064
000066
000070
000072
                   001060
                                                             .WORD
.ASCII
                                                                       ST2R4
                                 065
                                                                       ZR52
    53
54
55
                   001054
                                                             .WORD
                                                                       ST2R5
                                 066
                                                             .ASCII
        000076
                   0010501
                                                             .WORD
                                                                       ST2R6
        000100
                       122
                                 067
                                                             .ASCII
                                                                       ZR7Z
        000102
                   001044
                                                             .WORD
                                                                       ST2R7
                                         Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
```

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CPREST: MACRO:Mill0 27-MAR-80 14:44 PAGE 5-1
                                       Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
         000104
                      122
                                070
                                                         .ASCII. /R8/
         000106
                   0010401
                                                         .WORD
                                                                   ST2R8
         000110
                                071
                                                         .ASCII-
      61
         000112
                   001034
                                                         .WORD
                                                                   ST2R9
         000114
      62
                      122
                                101
                                                         .ASCII
                                                                   ZRAZ
         000116
                   001030
                                                                   ST2RA
         000120
                                102
                                                          .ASCII
                                                                   ZRBZ
      65
         000122
                   0010241
                                                          .WORD
                                                                   ST2RB
         000124
      66
                                103
                      122
                                                         .ASCII
                                                                   ZRCZ
         000126
                   001020
                                                          .WORD
      68
         000130
                                104
                                                          .ASCII
                                                                   /RD/
      69
         000132
                   001014
                                                         .WORD
                                                                  ST2RD
         000134
                                105
                                                          .ASCII
                                                                   /RE/
      71
72
         000136
                   0010101
                                                         .WORD.
                                                                  ST2RE
         000140
                      122
                                106
                                                                  ZRFZ
ST2RF
      73
74
75
76
         000142
                  001004
                                                         .WORD
                   000031
                                               ST2LN-
                                                                   <.-ST2TBL>/4
                                                         READ
                                                         TABLE OF VALID MNEMONICS AND ASSOCIATED ROUTINE ADDRESSES
      79
         000144
                                               RE2TBL::
     88
         000144
000146
                      115
                                101
                                                         .ASCII
                                                                  ZMAZ
RE2MA
                                                                                               ; READ · MEMORY · ADDRESS REG
                  0012307
115
     81
                                                         .WORD
         000150
                                120
                                                         .ASCII
                                                                                               :READ · MICROPGM · ADDRESS
     83
         000152
                  0012601
                                                         .WORD
                                                                  RE2MP
         000154
     84
                      104
                                104
                                                         .ASCII.
                                                                  ZDDZ
                                                                                               :READ · DMA · DATA · REG
         000156
                  001314
                                                         .WORD
                                                                  RE2DD
     96
         000160
                      122
                               060
                                                         .ASCII
                                                                                               : CP - REGISTER - 0
     87
         000162
                  0014421
                                                         .WORD
.ASCII
                                                                  RE2R0
     88
         000164
                               061
                                                                  ZR1Z
     89
         000166
                  001436
                                                         .WORD
                                                                  RE2R1
     90
         000170
                      122
                               062
                                                         .ASCII.
                                                                  /R2/
         000172
                  001432
                                                         .WORD
                                                                  RE2R2
     92
93
         000174
                               063
                                                         .ASCII.
         000176
                  001426
                                                                  RE2R3
     94
        000200
000202
000204
                                                         .ASCII.
                                                                  /R4/
     95
                  001422
                                                         .WORD
                                                                  RE2R4
                               065
                                                         .ASCII
                                                                  ZR5Z
     97
98
         000206
                                                         .WORD
.ASCII
.WORD
                                                                  RE2R5
        000210
000212
000214
                               966
                                                                  ZR6Z
                  0014123
                                                                  RE2R6
    100
                               067
                                                         .ASCII
    101
        000216
                  001406
                                                         .WORD
                                                                  RE2R7
        000220
000222
    102
                      122
                               070
                                                         .ASCII
                                                                  ZR8Z
    103
                  0014024
                                                         .WORD
                                                                  RE2R8
    104
        000224
                               07 i
                                                         .ASCII
        000226
000230
    185
                  001376
                                                         .WORD
                                                                  RE2R9
    186
                  122
001372
                               101
                                                         .ASCII.
                                                                  ZRAZ
         000232
                                                         .WORD
                                                                  RE2RA
    198
        000234
                               102
                                                         .ascii.
                                                                  ZRBZ
                  001366
122
    109
        000236
                                                         .WORD
                                                                  RE2RB
    110
        000240
                               103
                                                         ASCII
   111 000242
112 000244
                  001362
                                                         .WORD
                                                                  RE2RC
                                                                                                                             AND MINERAL PROPERTY.
                     122
                               104
                                                         .ASCII.
                                                                  /RD/
```

.WORD

.ASCII

RE2RD

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ZREZ

iiЗ

000246

114 000250

```
CPREST M 27-MAR-80 14:44 PAGE 5-2 Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
                                                                 .WORD-
     115 000252
                     0013524
     116 000254
                                                                .ASCII. /RF/
                                                                           RE2RF
                     0013461
     117
                                                                 .WORD
                                                      RE2LH
                                                                           <.-RE2TBL>/4
     118
                     000023
     119
      120
      121
                                                                STORE:
                                                                STORE:
PERFORM: THIRD: LEVEL: PARSING:
EG. IN: THE: COMMAND:
CP>ST: 0 CR:
PARSE: THE: "0"
      122
      123
      125
126
      128 - 000260
                                                      ST2::
                                                                CALL -
                                                                                                           :FIND-OPERAND-IN-COMMAND-LINE:
:OK, CONTINUE:
:NOTHING-THERE:
      129 000260
                                                                           FIND
      130 000264
                     103004
                                                                           1 $
           000266
                                                                           ERR4
                                                                CALL
                                                                                                           *RETURN:TO TOP:OF:LOOP:(PROMPT)

*CONVERT:VALUE:IN:COMMAND:LINE TO:BINARY
      132.000272
                     000167
                               000636
                                                                 JMP .
                                                                           ST2X
      133 000276
                                                                CALL
                                                                           PACK
           000302
                                                                BCC.
                     103004
                                                                           2$
                                                                CALL
           000304
                                                                           ERR5
      136
           0003i0
                     000167 000620
      137
                                                                CONTINUE - PARSING -
      139
                                                                FIND THE REGISTER MNEMONIC IN THE COMMAND LINE
      149
           000314
      141
                                                                CALL
                                                                           FIND
                                                      2$:
                                                                                                           :LOCATE · A · NON-BLANK ·
      142-000320
                      103004
                                                                BCC.
                                                                           3$
      143
          000322
                                                                           ERR4
                                                                CALL
                     000167 000602
      144 000326
      145
                                                                MATCH: THE: MNEMONIC: FROM: THE: COMMAND: LINE: AGAINST: THE TABLE: OF: VALID: MNEMONICS:
      146
      147
      148
           000332
                                                                                                           :NUMBER: OF TABLE: ENTRIES: :R2:-> TABLE:
      149
                     012700
                                000031
                                                                MOV-
                                                                           #ST2LN,R0
          000336
000342
      159
                                                                MOV.
                                                                           #ST2TBL,R2
                     012702
                                000000
                                                                                                           :MATCH AGAINST COMMAND LINE
                                                                CALL
      152.000346
                                                                 BCC.
                                                                                                           OK, CONTINUE
      153
           000350
                                                                CALL
                                                                           ERR6
      154
           000354
                     000167 000554
                                                                 JMP .
                                                                           ST2X
      155
                                                                SAVE-THE-POINTER-TO-THE-ROUTINE-ASSOCIATED WITH-THE-
REGISTER, R1 -> ROUTINE-ADDRESS;
CALL-ROUTINE TO-SCAN-COMMAND-LINE-FOR-LOOP INDICATOR.
EG. CP>ST-Ø CR-L-
LOOP-FLAG-WILL-BE-SET-IF-INDICATOR-IS-PRESENT;
      156
      157
      158
      160
      161
162
                                                                 JUMP . TO . ROUTINE . TO . LOAD . REGISTER.
      163
                                                                                                           SAVE POINTER TO THE LOOP?
      164 000360 010167 000000G
                                                                MOV-
                                                                           R1.RTHPT
                                                                           LOOPR
RTHPT,R1
                                                                CALL
MOV:
      165 000364
           000370
      166
                     016701
                                000000G
                                                      ST2IN:
           000374
                     000171 000000
                                                                           @(R1)
      168
      169
                                                                CP CONTROL REG.
      171
                                            Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
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CPREST: MACRO: M1110 27-MAR-80 14:44 PAGE: 5-3 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
                                                    ST2CR::
     172 900400
                                                              MOV.
                                                                                                       :MOVE-DATA TO-LOD-BUS-REG
:DIRECT-CNTL-WORD-TO CP-
     173 000400
                    016746
                               000000G
                                                                        BINWD,-(SP)
     174 000404
                                                              CALL
                                                                        CPCR
                                                                        ST2LP
     175
         000410
                    000167
                               000504
                                                              JMP .
                                                                                                       :TEST-LOOP FLAG
     176
                                                              BREAKPOINT REG
     179
          000414
                                                    ST2BK::
                                                                         #CBKCLKEN,-(SP)
                                                                                                       :SET-CP-CNTL-FOR-BREAKPOINT
:DIRECT-CNTL-WORD-TO CP-
     180
          000414
                     012746
                               000400
                                                              MOV
     181
          000420
                                                              CALL
                                                                        CPCR
          000424
                                                              MOV
                                                                         BINWD,-(SP)
                                                                                                       :LOAD DATA WORD INTO LOAD BUS REG
:SET BCE CHTL WORD
      183
          000430
                                                              CALL
                                                                         LBCP
                                                                        STZLP
      184 000434
                     000167
                               999469
                                                              JMP.
                                                                                                       :TEST-LOOP FLAG
      185
                                                              MEMORY - ADDRESS - REG
      186
      187
          000440
                                                    ST2MA::
      188
          000440
      189
                     012746
                               000230
                                                                         #<PLRWR+PLD>,-(SP)
                                                              MOV
                                                                                                       DIRECT CNTL WORD TO CP
          000444
      190
                                                              CALL
                                                                        CPCR
      191
          000450
                     012746
                               010000
                                                              MOV.
                                                                         #<MARLOD>.-(SP)
                                                                                                                                                NS
                                                                                                    SEND DATA TO CP.
SET MAREN BIT AND AUSO
CLEAR PLR D ENABLE BITS
MOVE DATA WORD TO LOD BUS REG
      192.000454
                                                              CALL
                                                                        LBCP
      193
          000460
                     012746
                               000001
                                                                         #<MREN1>, -(SP)
                                                              MOV
                                                                                                                                                NS
          000464
                                                                        CPCR
                                                              CALL:
      195
          000470
                                                                         BINWD,-(SP)
                               000000G
                                                              MOV.
      196
          000474
                                                              CALL
                                                                         LBCP
      197
          000500
                     012746
                               000230
                                                              MOV
                                                                         #<PLRWR+PLD>,-(SP)
          000504
                                                                                                       ;DIRECT:CNTL:WORD:TO CP:CR
;CLEAR PLR-D:BITS:
;SEND:DATA TO:CP:
                                                              CALL
                                                                         CPCR
      199
          000510
                     005046
                                                              CLR
                                                                          (SP)
                                                                                                                                                NS
      200
          000512
                                                              CALL
CLR:
                                                                        LBCP
                                                                                                                                                NS
      201
           000516
                                                                         -(SP)
                                                                                                       :CLEAR · CP · CR · BITS ·
: DIRECT · CNTL · WORD · TO · CP · CR ·
      282
          · 000520
                                                                         CPCR
                                                                                                                                                NS
      203
          000524
                     000167
                               000370
                                                                         ST2LP
      204
      205
                                                              CP PIPELINE REG SECTION A
      286
      207
                                                                        IF-CSR-#2-IS-SET-UP-FOR-SEARCH MODE-FOR-ANY-REASON. THESE 4 PIPELINE-ROUTINES-WILL NOT-WORK-!!!!
                                                              HOTE:
      208
      209
          000530
000530
                                                    ST2PA::
      210
                     012746
                               000200
                                                              MOV
                                                                         #PLRWR,-(SP)
      211
          000534
                                                              CALL
                                                                         CPCR
                                                                                                       ;DIRECT-CHTL-WORD-TO CP
      212
          000540
                     016746
                               000000G
                                                              MOV-
                                                                         BINWD, - (SP)
                                                                                                       :MOVE-DATA WORD-TO-LOD-BUS-REG
     213 000544
214 000550
                                                                         LBCP
                                                              CALL
                     005046
                                                              CLR
                                                                         -(SP)
      215
          000552
                                                                         CECR
                                                                                                       : CLEAR·THE·CONTROL·REGISTER
:TEST·FOR·REPEAT·
                                                              CALL
                                                                                                                                                NS:
     216
          000556
                     000167
                                                                         ST2LP
                                                              CP PIPELINE REG SECTION B. CAUTION: DO NOT SET BIT 14 DURING THIS TEST. IT WILL LOCK
      218
     219
220
                                                              UP THE BUS
      221
                                                              ALSO DO NOT USE XXX1, XXX2, XXX6, XXX7, OR XXXA
      223
          000562
                                                    ST2PB::
      224
          000562
                     012746
                               000210
                                                              MGV
                                                                         #<PLRWR+PLB>,-(SP)
     225
          000566
                                                                                                       DIRECT CHARA WORD TO LOD BUS REG
SEND DATA TO CP.
                                                                         CPCR
                                                              CALL
     226
227
          000572
                     016746
                               000000G
                                                              MOV.
                                                                         BINWD, - (SP)
          000576
                                                                        LBCP
                                                                                                                                                . 14
                                                              CALL
```

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NS.

228

000602

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RO M1110 27-MAR-80 14:44 PAGE 5-4
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229 000604
                                                         GALL.
                                                                   CPCR
                                                                                                 ; CLEAR THE CONTROL REGISTER.
230
     000610
               000167 000304
                                                                                                                                         NS
                                                                   ST2LP
                                                                                                 :TEST.FOR.REPEAT
231
                                                        CP PIPELINE-REG-SECTION-C-CAUTION: DO-NOT-SET-BIT-14 DURING-THIS-TEST: IT-WILL LOCK-
232
233
234
235
236
     000614
                                               ST2PC::
237
     000614
               012746
                          000220
                                                        MOV
                                                                   #<PLRWR+PLC>,-(SP)
238
     000620
                                                         CALL
                                                                   CPCR
                                                                                                 ;DIRECT-CNTL-WORD-TO CP-
;MOVE-DATA WORD-TO-LOD-BUS-REG
;SEND-DATA TO-CP-
239
     000624
000630
                                                        MOV-
                                                                   BINWD_* - (SP)
240
                                                         CALL
                                                                  LBCP
241
     000634
                005046
                                                                   -(SP)
                                                        CLR -
242 000636
                                                                   CPCR
                                                        CALL
                                                                                                 : CLEAR THE CONTROL REGISTER 7: TEST FOR REPEAT
243
     000642
               000167 000252
                                                         JMP
                                                                   ST2LP -
244
245
                                                        246
247
248
     000646
000646
249
                                              ST2PD::
250
               012746 000230
                                                                  #<PLRWR+PLD>.~(SP)
CPCR
                                                        MOSZ
25 i
     000652
                                                        CALL
                                                                                                 ;DIRECT-CHTL-WORD-TO CP-
     000656
               016746
                          000000G
                                                        MOV.
                                                                  BINWD,-(SP)
                                                                                                 :MOVE · DATA WORD · TO · LOD · BUS · REG
:SEND · DATA TO · CP ·
253 000662
                                                        CALL
CLR:
                                                                  LBCP
254 000666
               005046
                                                                  -(SP)
255 000670
                                                                  CPCR
                                                        CALL
                                                                                                 ; CLEAR THE CONTROL REGISTER - Ins
256 000674
257
258
               000167
                         000220
                                                        JMP.
                                                                  ST2LP -
                                                        WRITE DMA ADDRESS REGISTER
259
260 000700
                                              ST2DA::
261 000700
               012746
                                                        MOV.
                                                                  #<PLRWR+PLB>.-(SP)
262.000704
263 000710
264 000714
                                                        CALL
                                                                  CPCR
                                                                                                 :SET-UP-PLR-B-
               012746
                         000005
                                                        MOV.
                                                                                                SET VALUE FOR CONTROL WORD ...
SEND WORD TO CP
SET VALUE FOR DMA REG
TRANSFER TO CP
CLEAR CP CONTROL REG
                                                                  #DMAAWRH,-(SP)
                                                        CALL
                                                                  LBCP
     000720
265
               016746
                         000000G
                                                        MOV.
                                                                  BINWD,-(SP)
266 000724
267 000730
268 000732
                                                        CALL
                                                                  LBCP
               005046
                                                        CLR.
                                                                   -(SP)
                                                        CALL
                                                                  CPCR
269 000736
270
               000167
                                                                  ST2LP:
271
272
                                                        WRITE DMA DATA REGISTER
273 000742
274 000742 012746
                                              ST2DD::
                         000210
                                                        MOV-
                                                                  #<PLRWR+PLB>.-(SP)
                                                                                                SET-UP-PLR-B
SET-VALUE FOR CONTROL WORD
SEND WORD TO CP
SET-VALUE FOR DMA REG
TRANSFER TO CP
CLEAR CP CONTROL RES
275 000746
                                                        CALL
                                                                  CPCR
276 000752
277 000756
               012746
                                                        MOV-
                                                                  #DMARWRH,-(SP)
LBCP
                                                        CALL
278 000762 016746
                         000000G
                                                        MOV.
                                                                  BINWD, - (SP)
279
    000766
                                                        CALL
                                                                  LBCP
280 000772
281 000774
               005046
                                                        CLR.
                                                                  -(SP)
                                                                  CPCR
                                                        CALL
282-001000 000167 000114
                                                                  ST2LP
283
284
                                                        LOAD · CP · REGISTERS
285
                                     Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
```

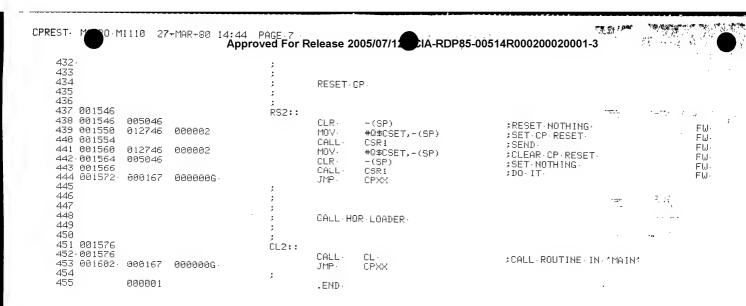
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CPREST- MACRO-Mill® 27-MAR-80 14:44 PAGE 5-5
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     286 001004
                               000000G
                                                                          INDEX
     287
          001010
                     005267
                               000000G
                                                     ST2RE::
                                                                          INDEX
          001014
                                                    ST2RD::
     288
                                                               IHC
                     995267
                               000000G
                                                                          INDEX
          001020
                     005267
                               000000G
                                                     ST2RC::
                                                                          INDEX
     290
          001024
                                                     ST2RB::
                                                                          INDEX
     291 001030
292 001034
                     005267
                               000000G
                                                     ST2RA::
                                                                          INDEX
                     005267
                               ийййййй
                                                     ST2R9::
                                                               IHC
IHC
                                                                          INDEX
     293 001040
294 001044
                                                     ST2R8::
                     005267
                               000000G
                                                                          INDEX
                     005267
                               000000G
                                                     ST2R7::
                                                                          INDEX
     295
                                                    ST2R6::
ST2R5::
ST2R4::
          001050
                     005267
                               000000G
     296
          001054
                     005267
                               ийийийи
                                                               IHC
IHC
                                                                          INDEX
          001060
                               000000G
                                                                          INDEX
     298
          001064
                     005267
                               000000G
                                                     ST2R3::
                                                               INC
                                                                          INDEX
     299
300
          001070
001074
                     005267
                               000000G
                                                     ST2R2::
                     005267
                               000000G
                                                     ST2R1::
                                                              INC
                                                                          INDEX
          001100
                                                     ST2R0::
     302
     303 001100
304 001104
305 001110
                     016700
                               000000G
                                                               MO:
                                                                         INDEX, RO
                                                                                                         :PREPARE · TO · CALL · SUBRITN →
:LOAD · REGISTER ·
                                                               CALL
                                                                         LDREG -
     305
306
                     905067
                               000000G
                                                               OLR:
                                                                          INDEX
          001114
                     000167
                               000000
                                                               JMP
                                                                         ST2LP
     307
     308
     308
309
310 001120
311 001120
312 001125
313 001130
314
315 001134
316 001134
                     032767
                               000000G · 000000G
                                                                         #LOOP, BASE
                                                                                                         :REPEAT ?
                     001402
                                                               BEQ.
                                                                         ST2X
                                                               JMP
                                                                         ST2 IN
                                                    ST2X:
                                                               CALL
JMP:
                                                                         KILL
                                                                                                         :KILL - AST -
     317 001140
                     000167
                               000000G
                                                                         CPXX
```

新世界等。第二世紀代

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CPREST-
                              ©0-Mł110 27+MAR+80 14:44 PAGE-6-
                                                                                    Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
          319
320
          321
                                                                                                                           READ
          322
323
                                                                                                                           PERFORM THIRD LEVEL PARSING
                                                                                                                           EG. IN THE COMMAND:
CP>RE CR
PARSE THE CR!
          325
          326
327
          328-001144
                                                                                                       RE2::
          329
                                                                                                                                                                                                             ;FIND.A.REG.MNEMONIC IN.COMMAND.LINE
;OK. CONTINUE:
;NOTHING.THERE:
;RETURN.TO TOP.OF.LOOP.(PROMPT)
                    001144
                                                                                                                           CALL
BCC:
                                                                                                                                               FIND
          330 001150
331 001152
                                          103004
                                                                                                                                                1$
                                                                                                                                                ERR4
                   001156
                                         000167 000346
                                                                                                                            .IMP -
                                                                                                                                                RE2X
           333
          334
                                                                                                                           {\tt MATCH+THE+REGISTER+MNEMONIC+FROM-THE+COMMAND+LINE+AGAINST*} \cap {\tt MATCH+MNEMONIC+FROM-THE+COMMAND+LINE+AGAINST*} \cap {\tt MATCH+MNEMONIC+FROM-THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMMAND+THE+COMM
           335
                                                                                                                            THE TABLE OF VALID MNEMONICS.
           336
           337
                    001162
                                         012700
                                                              000023
                                                                                                       1$:
                                                                                                                           MOM
                                                                                                                                                #RE2LN,R0
#RE2TBL,R2
                                                                                                                                                                                                              :NUMBER OF TABLE ENTRIES
           339
                    001166
                                         012702
                                                             000144
                                                                                                                           MOV.
                                                                                                                                                                                                             ;R2.-> TABLE.
           339
                    001172
                                                                                                                           CALL
BCC-
                                                                                                                                                SCAN
                                                                                                                                                                                                             : MATCH - AGAINST - COMMAND - LINE -
           340
                    001176
                                          103004
                                                                                                                                                2$
                                                                                                                                                                                                              OK, CONTINUE
           341
                    001200
                                                                                                                           CALL
                                                                                                                                                ERR6
           342
                    001204
                                         000167
                                                             000320
                                                                                                                           JMP.
                                                                                                                                                RE2X
           343
          344
345
                                                                                                                           SAVE-THE-POINTER-TO-THE-ROUTINE-ASSOCIATED WITH-THE-REGISTER, R1 -> ROUTINE-ADDRESS.
CALL-ROUTINE TO-SCAN-COMMAND-LINE-FOR-LOOP INDICATOR.
          346
347
                                                                                                                           EG. CP>RE CR L.
          348
                                                                                                                           LOOP FLAG WILL BE SET IF INDICATOR IS PRESENT.
           349
                                                                                                                           JUMP TO ROUTINE TO LOAD REGISTER.
           350
          351 001210
                                        010167
                                                             000000G
                                                                                                                           MOV.
                                                                                                       2$:
                                                                                                                                               R1.RTHPT
                                                                                                                                                                                                             ;SAVE POINTER TO RTH ;LOOP?
           352.001214
                                                                                                                           CALL
                                                                                                                                               LOOPR
           353
                    001220
                                         016701
                                                             000000G
                                                                                                       RE2 IN:
                                                                                                                           MOV.
                                                                                                                                               RTMPT,R1
                                                                                                                                                                                                              : POINT · TO · ROUTINE
           354 001224
                                         000171
                                                             000000
                                                                                                                           JMP.
                                                                                                                                                @(R1)
                                                                                                                                                                                                              :EXECUTE - ROUTINE
          355
356
                                                                                                                           MEMORY-ADDRESS-REG
          358
359
                    001230
                                                                                                       RE2MA::
           360
                    001230
                                         812746
                                                             0000002
                                                                                                                           MOV.
                                                                                                                                                #<MAROUT>,-(SP)
           361
                    001234
                                                                                                                           CALL
                                                                                                                                               CPCR
                                                                                                                                                                                                             :DIRECT-CHTL-WORD-TO CP
           362
                    001240
                                                                                                                                               CPLB
                                                                                                                                                                                                             REQUEST CP TO LOD BUS
CLEAR THE CONTROL REGISTER
                                                                                                                           CALL
           363 001244
                                         005046
                                                                                                                           CLR.
                                                                                                                                                 -(SP)
          364 001246
                                                                                                                           CALL
                                                                                                                                                CPCR
          365 001252
                                         012601
                                                                                                                           MOV.
                                                                                                                                                (SP) + R1
                                                                                                                                                                                                              :CP-WORD-RETURNED-ON STACK
           366 001254
                                         000167
                                                                                                                           JMP -
                                                                                                                                               RE2PUT:
           367
                                                                                                                                                                                                                                                                         368
                                                                                                                           MICROPGM-ADDRESS-REG
          369
          370 001260
                                                                                                       RE2MP::
                                                                                                                                                                                                              DIRECT CNTL WORD TO CP
          371 001260
372-001264
                                         012746
                                                             000004
                                                                                                                           MOV-
                                                                                                                                                #CSADRD,-(SP)
                                                                                                                           CALL
                                                                                                                                               CPCR
          373 001270
                                                                                                                                               CPLB
                                                                                                                           CALL
                                                                                                                                                                                                              ; REQUEST · CP · TO · LOD · BUS
          374 001274
                                        005046
                                                                                                                           CLR
                                                                                                                                                -(SP)
                                                                                                                                                                                                              ; CLEAR.THE.CONTROL.REGISTER
                                                                                                                                                                                                                                                                                               NS
          375 001276
                                                                                                                                                CPCR
                                                                                    Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
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CPREST- MACRO-M:110 27-MAR-80 14:44 PAGE:6-1 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
                                                                                                 :CP-WORD-RETURNED-ON STACK:
:CLEAR-USELESS-BITS-
     376 001302 012601
                                                                    (SP) + R1
                                                          MOV
                   042701
                             176000
                                                                    #176000,R1
     378 001310
                   000167
                             000146
                                                                    RESPUT:
     379
     380
                                                          READ · DMA · DATA · REGISTER
     381
     382-001314
                                                 RE2DD::
     383 001314
                   012746
                             000210
                                                          MOM
                                                                    #<PLRWR+PLB>,-(SP)
                                                                                                 :DIRECT:CNTL:WORD:TO CP:
:SET:VALUE FOR:CONTROL:WORD
:SEND:DATA TO:CP:
     384 001320
                                                          CALL
                                                                    CPCR
     385
          001324
                   012746
                             000003
                                                          MOV.
                                                                    #DMARRDH,-(SP)
          001330
                                                          CALL
     387 001334
                                                          CALL
                                                                    CPLB
                                                                                                 :READ FROM CP
                                                                    (SP)+,R1
     388 001340
                   012601
                                                          MOV.
                                                                                                 :LOAD VALUE INTO R1 FOR PRINT
          001342
                                                                    RE2PUT
     389
                   000167
                             000114
                                                          JMP
     390
     39 i
                                                          PRINT-CP-REGISTERS
     392
          001346
                    005267
                             000000G
                                                 RE2RF:: INC
                                                                    INDEX:
     394
          001352
                    005267
                             000000G
                                                 RE2RE::
                                                                    INDEX
     395
          001356
                    005267
                             000000G
                                                 RE2RD::
                                                                    INDEX
                   005267
005267
     396
          001362
                                                 RE2RC::
                             000000G
                                                          THC
                                                                    INDEX
          001366
                             000000G
                                                 RE2RB::
                                                          INC
                                                                    INDEX
          001372
                    005267
                                                 RE2RA::
                                                                    INDEX
                                                 RE2R9::
     399
          001376
                    005267
                             000000G
                                                          INC
                                                                    INDEX
                    005267
     400
          001402
                             имимина
                                                          INC
                                                                    INDEX
     40 i
          001406
                             000000G
                                                 RE2R7::
                                                                    INDEX
     402.001412
403 001416
                    005267
                             000000G
                                                 RE2R6::
                    005267
                             000000G
                                                 RE2R5::
                                                          TNC
                                                                    INDEX
          001422
                    005267
                             000000G
                                                 RE2R4::
                                                          THO
                                                                    INDEX
     405
          001426
                    005267
                             000000G
                                                 RE2R3::
                                                                    INDEX
                                                 RE2R2:: INC
RE2R1:: INC
     486
          001432
                   005267
                             000000G ·
                                                                    INDEX
          001436
     407
                    005267
                             9999996
                                                                    INDEX
     408
          001442
                                                 RE2R0::
                                                                                                 :PREPARE TO CALL SUBRIN
     409
          001442
                                                                    INDEX, RO
     419
                    016700
                             000000G
                                                          MOV-
         001446
001452
     411
                                                          CALL
                                                                    REREG
     412
                    005067
                             000000G
                                                          CLR -
                                                                    INDEX
     413
          001456
                    000167
                                                                    RE2PUT
     414
     415
                                                                                                 :PRINTED:ONCE:?
:YES, SKIP
:SET:FLAG:FOR:PRINTED:ONCE:
:POINT:TO:PRINT:LINE
:CONVERT:VALUE:IN:Rd FOR:PRINTING:
:PRINT:ON:CONSOLE:
     416
          001462
                    032767
                             000000G .000000G RE2PUT: BIT
                                                                    #ONCE, BASE
          001470
                    001011
                                                          BHE
                                                                    1$
         001472
001500
     418
                    052767
                             000000G:000000G
                                                          BIS
                                                                    #ONCE, BASE
                    012705
     419
                             имимиясь.
                                                          MOW
                                                                    #PRINT, R5
          001504
                                                          CALL
                                                                    UNPK
     421
          001510
                                                          CALL
     422
     423
          001514
                             000000G-000000G-1$:
                                                                    #LOOP,BASE
                    032767
                                                          BIT
                                                                                                 :REPEAT
          001522
                    001402
                                                          BEQ
                                                                    RE2X
                                                                                                 :NO, EXIT
     425
          001524
                    000167
                              177470
                                                           JMP
                                                                    RE2IN
                                                                                                  :EXECUTE · ROUTINE · AGAIN ·
     426
          001530
                                                 RE2X:
                                                                                                 CLEAR PRINT CONTROL FLAGT
     428-001530
                    042767
                             000000G-000000G
                                                          віс.
                                                                    #ONCE, BASE
          001536
                                                          CALL
JMP:
                                                                    KILL
CPXX
     429
          001542
                   000167
                             000000G-
                                                                                                                              4 10 to 8 7 1
```

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CPREST: MACRO: M1110 27-MAR-80 14:44 PAGE: 7-1
SYMBOL TABLE: Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
ALUCKE = . 040000
                              BYTE48= 000050
                                                             BYTE92=-000134
                                                                                          MMLEFT= : 000002
                                                                                                                        Q$11SET= 000004
Q$MSP = 100000
ALU0E - - 004000
                              BYTE41 = 000051
                                                             BYTE93=-000135
                                                                                                 =-000004
A01 = 010000
BASE = ******* 17
                              BYTE42= 000052
                                                             BYTE94= 000136
                                                                                          MMWRTE= 000010
                                                                                                                        Q$NCLK= 176000
                                                             BYTE95= 000137
                              BYTE43 = - 000053
                                                                                          MNOBRE = 100000
                                                                                                                               = 000100
BINWD = ****** GX
                              BYTE44= 000054
                                                            BYTE96= 000140
                                                                                          MREN1 = 000001
                                                                                                                        Q$PPSW= 000320
BITVAL = 000000
BIT0 = 000001
BIT1 = 000002
                              BYTE45= 000055
                                                             BYTE97= 000141
                                                                                          MREN2 - - 020000
                                                                                                                        Q$PP2 = 000300
                              BYTE46= 000056
                                                             BYTE98= 000142
                                                                                          MSYN - 000040
                                                                                                                        Q$QHLT= 000013,
                                                            BYTE99=-000143
BYTVAL=-000144
CBKALL=-001000
                              BYTE47 = . 000057
                                                                                                  = .000144
                                                                                                                        Q$QL
                                                                                                                                  000043
BIT10 = 002000
                              BYTE48= 0000060
                                                                                          ONCE: = ****** GX
                                                                                                                        Q$QLA -= -
                                                                                                                                  999953
BIT11 = 004000
                              BYTE49= 000061
                                                                                          PACK -
                                                                                                 = · ****** GX
                                                                                                                        Q$QLB. =.
                                                                                                                                  000054
BIT12 - - 010000
                              BYTE5 = 000005
                                                             CBKCLK = . 000400
                                                                                                  - 999919
                                                                                          PLB -
                                                                                                                        Q$QLR -=
 BIT13 = 020000
                              BYTE50--000062
                                                                   = · ******** GX ·
                                                             CL
                                                                                          PLC
                                                                                                  = 000020
                                                                                                                        Q$QW = 000042
BIT14 = 040000
BIT15 = 100000
                                                            ČĹ2
                              BYTE51= 000063
                                                                      001576RG
                                                                                          PLD = 000030
PLRWR = 000200
                                                                                     002
                                                                                                                        Q$RDCD= 000005
                              BYTE52= 000064
                                                            CNOBRE = 100000
                                                                                                                        Q$RDMD= 000006
BIT2 - 000004
                                                                                          PLR:EN=-000200
PRINT-=-******** GX-
                              BYTE53= 900065
                                                             CONSOL = · *****
                                                                                                                        Q$REBK=-001000
        = · 000010
= · 000020
= · 000040
                              BYTE54= 000066
                                                            CPCCEN= 010000
                                                                                                                        Q$RNC = 006000
                              BYTE55= 000067
                                                            CPCR · = · ******* GX · CPLB · = · ****** GX ·
BIT4
                                                                                          QR$CR1=:176420
                                                                                                                        Q$RSC -=
                                                                                                                                  994999
BITS
                              BYTE56= 000070
BYTE57= 000071
                                                                                          OR$CR2= - 176422
                                                                                                                        Q$RSET=
                                                                                                                                  000010
        = 000100
                                                            CPREAD = 040000
CPWRTE = 020000
CPXX = ******* GX
                                                                                          QR$LBR= 176424
                                                                                                                        Q$SM = 100000
BITZ
        = 000200
                              BYTE58= 000072
                                                                                          Q$ATTN= 000100
                                                                                                                        Q$SP
                                                                                                                                  000120
        = 000400
BIT8.
                              BYTE59= 000073
BYTE6 = 000006
                                                                                          Q$BCL - - 000001
Q$CCCP - 000040
                                                                                                                        0$SP2 - = -
                                                                                                                                  000340
        = 001000
BIT9
                                                            CSADRD = . 000004
                                                                                                                        REREG - - ***** GX
       = 000000
                              BYTE60= 000074
                                                            CSEQCI=-100000
CSOE- =-000040
CSR1 =-******** GX-
                                                                                          O$CHB - = -000400
                                                                                                                        RE2DD
                                                                                                                                  001144RG
001314RG
                                                                                                                                                 992
BYTE1 = 000001
                              BYTE61 = . 000075
                                                                                          Q$CHRL= 000200
                                                                                                                                                 002.
BYTE10=-000012
BYTE11=-000013
                              BYTE62= 0000076
                                                                                          Q$CLR - = -000040
                                                                                                                        REZIN.
                                                                                                                                                 002
                              BYTE63= 000077
                                                            CSWRTE = - 000100
                                                                                          Q$CNC - - 030000
                                                                                                                        RE2LH =
                                                                                                                                  7000023 G
bYTE12= 000014
                              BYTE64= 000100
                                                            DBR.RD=-000001
                                                                                          Q$CP - 000060
                                                                                                                        RE2MA
                                                                                                                                  001230RG
                                                                                                                                                 002
BYTE13= 000015
                              BYTE65= 000101
                                                                                                                        REZMP
                                                            DB$CPP=-001457
                                                                                          Q$CPCC= .000010
                                                                                                                                  001260RG
                                                                                                                                                 002
                              BYTE66= 000102
                                                            DB$SPT= 000026
BYTE14= 000016
                                                                                          Q$CP2·=·000260
Q$CSC·=·010000
                                                                                                                        RE2PUT
                                                                                                                                  001462R
                                                                                                                                                 002
BYTE15= 000017
                              BYTE67=-000103
                                                            DB$TPC= 000023
                                                                                                                                  001372RG
                                                                                                                        RE2RA
                                                                                                                                                 002
BYTE16= 000020
                              BYTE68= 000104
                                                            DISPGS=-100000
                                                                                          0$CSEL = : 000360
                                                                                                                                  001366RG
                                                                                                                        RE2RB
                              BYTE69= 000105
BYTE7 = 000007
BYTE17= 000021
                                                            DMAAUR = - 000005
                                                                                          Q$CSET= 0000002
                                                                                                                        REZRC
                                                                                                                                  001362RG
                                                                                                                                                 002
BYTE18= 000022
                                                            DMARRD = . 000003
                                                                                          Q$CSP - = - 020000
                                                                                                                        RE2RD
                                                                                                                                  001356RG
                                                                                                                                                 002
BYTE19= 0000023
                              BYTE70= 000106
                                                            DMARUR = 000004
                                                                                          Q$DMA · = · 000001
                                                                                                                        RE2RE
                                                                                                                                  ЙЙ1352RG
                                                                                                                                                 002
BYTE2 - = - 000002
                              BYTE71= 000107
BYTE72= 000110
                                                            ENBR -
                                                                  = 010000
                                                                                          Q$ENBK = . 040000
                                                                                                                        RE2RF
                                                                                                                                  001346RG
                                                                                                                                                 002
BYTE20= 000024
                                                            ERR4
                                                                   = · ******* GX
                                                                                          Q$ENOP = . 020000
                                                                                                                        RE2R0
                                                                                                                                  001442RG
                                                                                                                                                 002
BYTE21= 000025
                              BYTE73= 000111
                                                            FRR5
                                                                   =·***** GX
                                                                                          Q$FAL - = - 004000
                                                                                                                        RE2R1
                                                                                                                                  001436RG
                                                                                                                                                 002
BYTE22= 000026
BYTE23= 000027
                              BYTE74= 000112
                                                            ERR6
                                                                   = · ***** GX
                                                                                          Q$FC· = 0000045
Q$FO· = 000044
                                                                                                                        RE2R2
                                                                                                                                  001432RG
                                                                                                                                                 002
002
                              BYTE75=-000113
BYTE76=-000114
BYTE77=-000115
                                                                   =·****** GX
                                                            FIND
                                                                                                                        RE2R3
                                                                                                                                  001426RG
BYTE24= 000030
                                                            INDEX -- - ***** GX
                                                                                                = 000046
                                                                                          Q$FP.
                                                                                                                        RE2R4
                                                                                                                                  001422RG
                                                                                                                                                 002
BYTE25=-000031
                                                            KILL: = ******* GX
                                                                                          Q$HBF - = - 000002
                                                                                                                        RE2R5
                                                                                                                                  001416RG
                                                                                                                                                 002
BYTE26= 000032
                              BYTE78= 000116
                                                                   =·***** GX
                                                            LECP
                                                                                          Q$ICP -- 000006
                                                                                                                        RE2R6
                                                                                                                                  001412RG
                                                                                                                                                 002
BYTE27 = · 000033
                              BYTE79= 000117
                                                            LDREG - - ***** GX
                                                                                          Q$IHB = 000003
Q$IHRL = 000002
Q$IMRP = 000007
                                                                                                                        RE2R7
                                                                                                                                  001406RG
                                                                                                                                                 002
BYTE28= 000034
                              BYTE8 = 000010
                                                            LOC.EN= 000100
                                                                                                                        RE2R8
                                                                                                                                  001402RG
                                                                                                                                                 002
BYTE29= 000035
                              BYTE80 = . 000120
                                                            LOC.WA=-040000
LOC.WB=-100000
LOOP- =-*********** GX
                                                                                                                        RE2R9
                                                                                                                                  001376RG
000144RG
                                                                                                                                                 002
BYTE3 = 000003
BYTE30= 000036
                              BYTE81= 000121
                                                                                          Q$LBD-=-001000
Q$LBDP=-001001
                                                                                                                        RE2TBL
                                                                                                                                                 002
                              BYTE82= 000122
                                                                                                                                  00Ï530R
                                                                                                                                                 002
BYTE31= 0000037
                              BYTE83=:000123
                                                            LOOPR - = - жижижижи GX -
                                                                                          Q$LBP - - 000001
                                                                                                                        RGQ.EN= 000200
BYTE32= 000040
                              BYTE84= 000124
                                                            MAREN1 = 000001
MAREN2 = 004000
                                                                                          Q$LDCD= 000003
                                                                                                                        RGQ.VA= 020000
BYTE33 = . 000041
                              BYTE85= 000125
                                                                                          Q$LDMD = 000004
Q$LDPP = 002000
                                                                                                                                  001546RG
                                                                                                                                                 002
BYTE34= 000042
                              BYTE86 = . 000126
BYTE87 = . 000127
                                                            MARLOD= 010000
                                                                                                                        RTNPT - - ***** GX
BYTE35 = . 000043
                                                            MAROUT = . 000002
                                                                                          Q$LHP -- 010000
                                                                                                                               = ********* GX
                                                                                                                        SCAN
BYTE36= 000044
                              BYTE88= 000130
                                                            MAR.LO= 002000
                                                                                          Q$MNC · = · 140000
                                                                                                                        SEQ.CI-000010
BYTE37= 000045
                              BYTE89=-000131
                                                            MAR.OU= 000040
                                                                                                                        500260RG
                                                                                                                                                 002
002
BYTE38= 000046
                              BYTE9 = 000011
                                                            MBKALL= 001000
                                                                                                                          Ť2Bk
BYTE39= 000047
                              BYTE90= 000132
                                                                                                               512BK
                                                            MBKCLK=-000400
                                                                                          Q$MRP2=.000240
                                                                                                                               `^^000400RG
                                                                                                                                                 002
BYTE4 = 000004
                              BYTE91= 000133
                                         Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3 ST2DA
                                                                                                                                  000700RG
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0 M1110 27-MAR-80 14:44 PAGE 7-2
Approved For Release 2005/07/1
SYMBOL . T
ST2DD.
            000742RG
                              002.TD$OAR=:176344
                                                                         T$SC: =:000022
T$SCLK=:020000
T$SEG!=:000000
                                                                                                             WORD33=-000102
                                                                                                                                                 WORD68=-000210
ST2IN:
ST2LN:
            000370R
000031 G
                                                                                                                                                 WORD69= 000212
WORD7 = 000016
                              002 · TD$0TR= · 176346
                                                                                                             WORD34= 000104
                                    TD$QRD= 000274
                                                                                                             WORD35=-000106
WORD36=-000110
                                                                                                                                                 WORD7 = 000016
WORD70= 000214
WORD71= 000220
WORD73= 000220
WORD73= 0002220
WORD75= 0002220
WORD75= 0002220
WORD76= 000230
WORD76= 000230
WORD77= 000232
            001120R
                              002·TD$SW·≕·176376
ST2LP
                                                                         ,T$SEG2= · 000001
ST2MA
ST2PA
            000440RG
                              002 · TD$TAR= · 176372
                                                                         T$SEG3= 000002
                                                                                                             WORD37=-000112
            000530RG
                              992 · TD$TAbl= · 176362
                                                                         T$SO· = 000001
T$UBUS= 100000
                                                                                                             WORD38=-000114
ST2PB
            000562RG
                              002
                                    ·TD$TDR=-176374
                                                                                                             WORD39 - 000116
WORD4 - 000010
ST2PC
                                    -TD$TDW=-176364
                                                                         T$1CLK=-000400
                              002 · T$AD · = · 000020
002 · T$BA · = · 000002
ST2PD
            000646RG
                                                                         T$8BEN= 000020
                                                                                                             WORD40= 000120
                                                                        UBD, IN= 000020

UNPK = ****** GX-

WCRD0 = 000000

WORD1 = 000002-

WORD10= 000024
                                                                                                             WORD41=-000122
WORD42=-000124
WORD43=-000126
ST2RA
            001030RG
ST2RB
            001024RG
                              002
                                    T$BD-
                                              = 000010
                                    T$BSO -= 100000

T$BT -= 000020

T$BTAR= 000030
ST2RC
            001020RG
                              002
                                                                                                                                                 WORD78= 000234
ST2RD
            001014RG
                              882
                                                                                                             WORD44= 000130
                                                                                                                                                 WORD79= 000236
ST2RE
            001010RG
                              002
                                                                                                             WORD45= 000132
WORD46= 000134
WORD47= 000136
                                                                                                                                                 WORD8 - 000020
ST2RF
            001004RG
                                    ·T$BTD·=·002000
                                                                         WORD11 = 000026
                                                                                                                                                 WORD80 = 000240
WORD81 = 000242
ST2R0
            001100RG
                              002 · T$CD · ~ · 000100
002 · T$CLK · = · 002000
                                                                         WORD12= 000030
ST2R1
            001074RG
                                                                         WORD13=-000032-
WORD14=-000034
WORD15=-000036
                                                                                                                                               WORD83= 000244
WORD83= 000244
WORD83= 000246
                                                                                                             WORD48=-000140
                                    T$DISK= 000200
ST2R2
            001070RG
                              002
                                                                                                             WORD49= 000142
                              002 · T$DRD · = · 000004
 ST2R3
            001064RG
                                                                                                             WORD5 = 000012
WORD50= 000144
                                                                                                                                                 WORD84= 000250
ST2R4
            001060RG
                                    · T$EMEM= · 010000
                                                                         WORD16= 0000040
                                                                                                                                                 WORD85= 000252
WORD86= 000254
WORD87= 000256
                                                                                                             WORD51= 000146
WORD52= 000150
WORD53= 000152
ST2R5
            001054RG
                              002 · T$FSAA = · 000000
                                                                         WORD17= 0000042
                              002 · T$FSAB= -000004
ST2R6
            001050RG
                                                                         WORD18= 000044
 ST2R7
            001044RG
                              882
                                    ·T$FSAC= -000014
                                                                         WORD19= 000046
WORD2 = 000004
                                                                                                                                                 WORD88= 000260
                                    ·T$FSB2=·000010
 ST2R8
            001040RG
                              002
                                                                                                             WORD54= 000154
WORD55= 000156
                                                                                                                                                 WORD89= 000262
WORD9 = 000022
ST2R9
            001034RG
                              002.T$IB. = 000026
                                                                         WORD20= 000050
                              002-T$IBAR=-000024
002-T$IBE-=-020000
T$IBF-=-040000
T$ICD-=-000040
                                                                         WORD21= 000052
WORD22= 000054
WORD23= 000056
ST2TBL
            000000RG
                                                                                                             WORD56= 000160
                                                                                                                                                 WORD90= 0000264
ST2X-
            001134R
                                                                                                             WORD57=-000162
                                                                                                                                                 WORD91= 000266
S$CLR.=.000000
                                                                                                             WORD58= 000164
                                                                                                                                                 UORD92= 000270
S$LA - = 0000001
                                                                         WORD24= 000060
                                                                                                             WORD59= 000166
                                                                                                                                                 WORD93= 000270
                                     T$MODE = 004000
 S$QB· = 0000005
                                                                         WORD25= 000062
WORD26= 000064
                                                                                                             WORD6 = 000014
                                                                                                                                                 WORD94= 000274
                                    T$0B: = 004000
T$0B: = 000036
T$0BE: = 004000
T$0BF: = 010000
T$06RA = 000034
S$QR - = 0000006
S$QX = 000004
S$SR = 000007
                                                                                                             WORD60= 000170
                                                                                                                                                 WORD95= 000276
WORD96= 000300
                                                                         WORD27 = . 000066
                                                                                                             WORD61= 000172
                                                                         WORD28--000070
                                                                                                             WORD62= 000174
                                                                                                                                                 WORD97= 000302
S$S1 = 000010
                                                                         WORD29= 000072
WORD3 = 000006
                                                                                                             WORD63= 000176
WORD64= 000200
                                                                                                                                                 WORD98∀ 0003047
WORD99= 000306
S$S2
        ≈·000014
                                     T$08WA= 0000032
TD$CTR= 176370
                                     T$0UTA=-100000
                                                                         WORD30= 000074
                                                                                                             WORD65= 000202
                                                                                                                                                 WRDVAL = - 000310
TD$CTW= 176360
                                     T$RBD0=.000200
                                                                         WORD31= 000076
WORD32= 000100
                                                                                                             WORD66= 000204
WORD67= 000206
                                                                                                                                                  XTREAD= 001000
                                     T$RNB - = 000040
T$RSET = 040000
 TD$INL= 004000
                                                                                                                                                  XTURTE = .000400
TD$MEM= 000270
 . ABS:
            000000
                             000
            000000
                             001
CPREST: 001606
                             002
ERRORS · DETECTED:
                           Й
VIRTUAL MEMORY USED: 3426 WORDS ( 14 PAGES)
DYNAMIC MEMORY: 4916 WORDS ( 18 PAGES)
ELAPSED TIME: 00:00:50
```

CPREST-

CPREST, CPREST/-SP=[20,1]IM,[20,1]CPREST

```
CPLD----M
                   0.M1110 27-MAR-80 14:43 PAGE.5
                                                   Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3
                                                                            .FITLE-GRLD.
         234567
            000000
                                                                           MEMORY LOAD ROUTINES
                                                                           COMMANDS:
        11
                                                                                       LOAD CP-MEMORIES.
                                                                           ONCE: A: COMMAND: HAS: BEEN: EXECUTED (OR: AN: ERROR: ENCOUNTERED) THIS: MODULE: RETURNS: CONTROL: TO: THE: MODULE: MRP: AT: LOCATION:
        15
                                                                            'CPXX'.
        16
        18
19
                                                                  ******************
                                                                          NOTE:
THE-GOMMAND-TO-LOAD-CP DATA-MEMORY-CANNOT-BE-USED-
UNLESS-MRP-MICROPROGRAM-MEMORY-AND-CP-CONTROL-STORE-
HAVE-BEEN-LOADED-VIA-THE-*LOADER* PROGRAM:
        20
        21
22
23
        24
        25
26
27
                                                                           IF THE QEX MEMORIES ARE EITHER LOADED OR PRINTED AFTER OP DATA MEMORY HAS BEEN LOADED, CP DATA MEMORY CONTENTS
                                                                           ARE LOST:
        29
30
        31
32
33
34
                                                                           .MCALL WTSE$S.CLEF$S.
                                                                           \mbox{TABLE} \cdot \mbox{OF} \cdot \mbox{VAL} \ \mbox{ID} \cdot \mbox{CP} \cdot \mbox{MEMORY} \cdot \mbox{MNEMON} \ \mbox{ICS} \cdot \mbox{AND} \cdot \mbox{ADDRESSES} \cdot \mbox{OF} \ \mbox{ASSOCIATED} \cdot \mbox{ROUTINES} \cdot
        37
38
            ававав
                                                               LD2TBL::
        39
            000000
                              103
                                                                            .ASCII-
                                          123
                                                                                        ZCSZ
                                                                                                                             ;LOAD·MICROPGM·MEMORY
        40
            000002
                         0002721
                                                                            .WORD
                                                                                       LD2CS
            000004
                              103
                                           104
                                                                            .ASCII-
                                                                                        ZCDZ
                                                                                                                             ;LOAD DATA MEMORY
        42
            • 000006
                         0004723
                                                                                       LD2CD
                         110
000734
            000010
000012
        43
                                          114
                                                                                        /HL/
                                                                                                                             :LOAD·HRL·BUFFER
        44
                                                                                       LD2HL
                                                                            .WORD
            000014
                              102
                                                                            .ASCII-
                                                                                       ZBLZ
                                                                                                                             ;LOAD-BCL
        46
            000016
                         0011141
                                                                            .WORD
                                                                                       LD2BL
        47
48
                         000004
                                                               LD2LH
                                                                                        <.-LD2TBL>/4
       49
50
51
52
53
54
55
                                                                          PERFORM THIRD LEVEL PARSING
EG. IN THE COMMAND:
CP>LD CD 0
PARSE TH 1CD1
            000020
                                                   Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
```

```
CPLD----MACRO-M1110 27-MAR-80 14:43 PAGE-5-1
                                                     Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
        58 000020
                                                                             CALL
                                                                                          FIND
                                                                                                                                 ;LOCATE: THE: MEMORY: MNEMONIC: IN THE: COMMAND: LINE:
        59 000024
                          103004
                                                                                                                                OK, CONTINUE:

'MISSING OPERAND:
                                                                             BCC:
                                                                                          1 %
        60
             000026
                                                                             CALL.
                                                                                          ERR4
        61 000032 000167
                                     001236
                                                                                          LD2X
                                                                                                                                 :EXIT-
        62
        63
                                                                             MATCH MINEMONIC IN THE COMMAND LINE AGAINST TABLE OF VALID MINEMONICS
                                                                ;
        64
            000036
000042
        65
                          012700
                                      000004
                                                                 į$:
                                                                             MOV
                                                                                          #LD2LN,R0
                                                                                                                                 ; NUMBER OF TABLE ENTRIES
        66
                                                                                          #LD2TBL,R2
                         012702
                                                                             MOV:
                                                                                                                                 :POINT:TO:TABLE:
:MATCH:AGAINST:COMMAND:LINE:
:MATCH:WAS MADE:
        67
             000046
                                                                             CALL
                                                                                          SCAN
             000052
                          103004
                                                                             BCC:
                                                                                          2$
        69
             000054
                                                                                          ERR7
                                                                             CALL
                                                                                                                                 : "INVALID - MEMORY - MNEMONIC:
        70
                          000167
             000060
                                      001210
                                                                             JMP.
        72
73
74
                                                                             SAVE-POINTER TO ROUTINE-ASSOCIATED-WITH-THE-MEMORY-MNEMONIC. SCAN-THE-REMAINDER-OF-THE-COMMAND-LINE-FOR CONTROL-INFORMATION:
                                                                             1. START-ADDRESS-ONLY, REPEAT-PROMPT-FOR-EACH-MEMORY-LOGATION. . . FROM THE START-ADDRESS-FORWARD, NB, END OF MEMORY (AS-DETECTED-BY-THE QMAIN-SUBROUTINE-PDATA) OR A-<<p>CR> RESPONSE TO THE PROMPT.
        76
77
        78
                                                                                  WILL TERMINATE THE LOAD. CP>LD CD 0
        79
                                                                                 CP>LD-CD-0
START-ADDRESS, LOOP INDICATOR, LOOP-ON-THE-LOADING-OF-THIS-ONE-MEMORY-LOCATION-ONLY,
CP>LD-CD-0 L
START-ADDRESS, END-ADDRESS, NO-LOOP, ISSUE-ONLY-ONE-PROMPT-AND-FILL-MEMORY-(BETWEEN-START-AND-END-ADDRESSES)
WITH-THIS VALUE,
CP>LD-CD-0 7
        80
        81
        82
        83
        84
        85
        86
        87
                                                                                 START ADDRESS, END ADDRESS, LOOP INDICATOR: ISSUE ONLY ONE PROMPT AND LOOP ON THE LOADING OF MEMORY (BETWEEN START AND END ADDRESSES) WITH THIS VALUE.
        88
        89
        90
                                                                                  CP>LD-CD-0 7 L
        92
        93
             000064
                         010167
                                      000000G
                                                                                          R1.RTHPT
                                                                             MOV-
                                                                                                                                 ;SAVE POINTER
        94
             000070
                                                                             CALL
                                                                                          FIND
                                                                                                                                ;LOCATE START ADDRESS IN COMMAND LINE :OK, CONTINUE
        95
             000074
                          103004
                                                                                          3$
                                                                             BCC
             000076
                                                                                                                                 :'MISSING OPERAND:
                                                                             CALL
                                                                                          FRR4
        97
             000102
                                                                             JMP -
                                                                                          LD2X
        98
            000106
                                                                3$:
                                                                             CALL
                                                                                          PACK
                                                                                                                                CONVERT.COMMAND.LINE.VALUE.TO BINARY:
CONVERSION.SUCCESSFUL:
''INVALID.NUMERIC.VALUE'
        99
            000112
                          103004
                                                                             BCC-
                                                                                          4$
       100
            000114
                                                                            CALL
JMP:
                                                                                          ERR5
       iñi
            000120
                         000167
                                                                                          LD2X
       102
                                      000000G · 000000G · 4$:
       103 000124
                         016767
                                                                                          BIHWD, MSTRT
                                                                                                                                :SAVE LOADING START ADDRESS : SAVE IT TWICE (FOR REFRESH ON LOOP) :INIT END ADDRESS
                                                                             MOV.
       104 000132
                                      000000G · 000000G ·
                         016767
                                                                                          BIHWD, MSTR2
                                                                             MOV.
       105 000140
                         012767
                                      177777
                                                                                          #-1.MEND
      106
                                                                            START ADDRESS HAS BEEN FOUND, SCAN FOR END ADDRESS OR LOOP INDICATOR (CONDITIONS 2, 3 ABOVE), IF THERE IS NOTHING FURTHER IN THE COMMAND LINE, CONDITION 1 IS IN EFFECT.
       107
       108
      109
      110
            000146
                                                                                         FIND
                                                                            CALL
                                                                                                                                SCAN COMMAND LINE

SOMETHING THERE

SIGNAL TO REPEAT PROMPTHY AND AND ADDRESS JUMP TO RTN
      112.000152.
113.000154
                        103004
052767
                                                                                          5$
                                                                                          #RP,BASE
                                      000000G-000000G-
                                                                            BIS.
      114 000162
                                                                                           9$
```

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CPLD----M 0.M1110 27-MAR-80 14:43 PAGE-5-2-
                                                                                   Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
                    000164
                                         122711
                                                             000114
                                                                                                      5$:
                                                                                                                           CMPB
                                                                                                                                               #*L,(R1)
           116
                                                                                                                                                                                                            :LOOP - INDICATOR
                                                                                                                                                                                                            :NO. MUST-BE-UPPER-ADDRESS
:SET-END-ADDR-=-START-ADDR
                                        001006
          117
                   000170
                                                                                                                           BNE.
                                                                                                                                               6$
                                                                                                                                              MSTRT, MEND.
                                                             000000G · 000000G
                                                                                                                           MOV
          118
                   000172
                                        016767
          119 000200
                                                                                                                           CALL
                                                                                                                                               HANG
                                                                                                                                                                                                            ;HOW-TO-STOP-LOOP-
;JUMP-TO-RTN-
           120
                    000204
           121
                                                                                                                           CALL
          122-000206
                                                                                                      6$:
                                                                                                                                               PACK
                                                                                                                                                                                                            :CONVERT-UPPER-ADDRESS
           123 000212
                                                                                                                           BCC-
                                         103004
                                                                                                                                               7$
                                                                                                                                                                                                            :OK, CONTINUE:
:INVALID:NUMERIC
           124 000214
                                                                                                                           CALL
                                                                                                                                               ERR5
                                        000167 001050
                                                                                                                                               LD2X
                                                                                                                                                                                                            :EXIT
           126
                                                                                                                            \begin{array}{l} {\sf SAVE} \cdot {\sf END} \cdot {\sf ADDRESS} \cdot ({\sf BINARY}) \\ {\sf CHECK} \cdot {\sf FOR} \cdot {\sf LOOP} \cdot {\sf INDICATOR} \cdot {\sf AFTER} \cdot {\sf END} \cdot {\sf ADDRESS} \end{array} \\ ({\sf CONDITIONS} \cdot {\sf CONDITIONS} \cdot {\sf ADDRESS} \\ \end{array} 
           127
           128
           129
                                                                                                                                                                                                            000224
           130
                                         016767
                                                             имимия почита 
                                                                                                                           MOV
                                                                                                                                               BINUD, MEND
           131
                    000232
                                                                                                                           CALL
                                                                                                                                               FIND
                     000236
                                          103411
                                                                                                                           BCS.
                                                                                                                                               9$
                                                                                                                                                                                                            : NO LOOP -
                                                                                                                                                                                                            CORRECT INDICATOR:
YES, CONTINUE:
LOOP OPTION ERROR
           133
                     000240
                                          122711
                                                                                                                           CMPB
                                                                                                                                                #*L, (R1)
           134
                    000244
                                         001404
                                                                                                                           BEQ.
                                                                                                                                               8$
           135
                    000246
                                                                                                                                               ERR11
                                                                                                                           CALL
                     000252
                                         000167
                                                                                                                           JMP
                                                                                                                                               LD2X
                     000256
                                                                                                      8$:
                                                                                                                                                                                                            :HOW-TO-STOP-LOOP-
           138
                                                                                                                                                                                                            :POINT.TO.ROUTINE
:JUMP.TO.ROUTINE.
           139
                    000262 016701 000000G
                                                                                                      9$:
                                                                                                                           MOV.
                                                                                                                                               RTHPT.R1
                     000266
                                         000171
            140
                                                                                                                                               @(R1)
           141
           142
           143
                                                                                                                           LOAD CONTROL STORE
            144
           145
                     000272
           146
                                                                                                      LD2GS::
                     000272
                                         005046
           147
                                                                                                                           CLR
                                                                                                                                                -(SP)
                                                                                                                                                                                                            ; CLEAR · NOTHING ·
                    000274
                                                                                                                                                                                                            ;CP·RESET·
;DO·IT·
           148
                                         012746
                                                             000002
                                                                                                                           MOV.
                                                                                                                                               \#Q\$CSET,-(SP)
            149
                    000300
                                                                                                                           CALL
                                                                                                                                               CSR1
                     000304
                                         012746
                                                                                                                                                                                                            :CLEAR · CP · RESET ·
                                                                                                                           MOV-
                                                                                                                                               #Q$CSET,-(SP)
           151
                    000310
                                         005046
                                                                                                                           CLR.
                                                                                                                                                                                                            ; SET · NOTH ING ·
           152
                    000312
                                                                                                                           CALL
                                                                                                                                               CSR1
                                                                                                                                                                                                            :SUPPLY-UPPER-MEMORY LIMIT
:LOWER-LIMIT-
:PREPARE-TO-LOAD-
           154
                    000316
                                         016746
                                                             000000G
                                                                                                                           MOV.
                                                                                                                                               CSHIGH, - (SP)
                    000322
000326
           155
                                         016746
                                                             000000G
                                                                                                                           MOV.
                                                                                                                                                CSLOW,-(SP)
            156
                                                                                                                                               BUFS4
                                                                                                                           CALL
                     000332
                                          103002
                                                                                                                           BCC.
                                                                                                                                                100$
                                                                                                                                                                                                            :NO ERRORS, CONTINUE
           158
                    000334
                                         000167
                                                             000734
                                                                                                                           JMP
                                                                                                                                               LD2X
                    000340
                                                                                                                                                #RP,BASE.
            160
                                         032767
                                                             000000G · 000000G · 100$:
                                                                                                                           BIT.
                                                                                                                                                                                                            :REPEAT.PROMPT.
:NO. ONCE.ONLY.
                     000346
                                         001416
                                                                                                                                                2$
           162 000350
163 000354
                                                                                                                                                                                                            ; READ · DATA FROM · COMMAND · LINE
                                                                                                                           CALL
                                                                                                                                               PDATA:
                                                                                                                                                                                                            **NOT END OF MEMORY ...

**IF END EXIT

**CCR> RESPONSE TO PROPERTY

**EXIT ON CODE RESPONSE **

**LOAD 4 SECTIONS

**BUMP LOAD ADDRESS
                                          103002
                                                                                                                           BCC:
                                                                                                                                                185
                    000356
                                         000167
            164
                                                             000712
                                                                                                                           JMP
                                                                                                                                               LD2X
                    000362
000364
            165
                                          102002
                                                                                                                           BVC
                                         000167
                                                             000704
           166
                                                                                                                           JMP.
                                                                                                                                               LD2X
                     000370
                                                                                                      20$:
                                                                                                                           CALL
                                                                                                                                               LOADCS -
           168 000374
                                         066767
                                                             000000G · 000000G
                                                                                                                           ADD
                                                                                                                                                INCVAL, MSTR2
           169
                    000402
                                        000762
                                                                                                                                                1$
           171
                                                                                   Approved For Release 2005/07/12: CIA-RDF85-00514R000200020001-3
```

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CPLD----MACRO-M1110 27-MAR-80 14:43 PAGE 5-3
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     172 ·
173 000404
                                                            CALL
                                                                      PDATA-
                                                                                                   :PROMPT
     174
         000410
                   103002
000167
                                                            BCC
JMP
                                                                      30$
                                                                                                   : NOT - END - OF - MEMORY -
     175
         000412
                             000656
                                                                      LD2X
                                                                                                   ;ELSE-EXIT
;NOT-<CR> RESPONSE
    176
177
         000416
                    102002
                                                  30$:
                                                            RVC
         000420
                    000167
                             000650
                                                            JMP
                                                                      LD2X
     178
         000424
     179
                                                            CALL
                                                                     LOADOS:
INCVAL,MSTR2
                                                                                                   :LOAD 4 SECTIONS
:ADVANCE ADDRESS
:HAS UPPER MEMORY LIMIT BEEN REACHED
                   066767
026767
101767
         000430
000436
     188
                              000000G · 000000G
                                                            ADD.
     181
                             000000G 000000G
                                                            CMP
                                                                     MSTR2, MEND
         000444
     182
                                                                                                   ;NO; CONTINUE;
;LOOP:ON:?
;YES; CONTINUE;
;NO:LOOP; EXIT
                                                            BLOS
                                                                      3$
                    032767
     183
         000446
                             000000G · 000000G ·
                                                            BIT
                                                                      #LOOP, BASE
     184 000454
                    001002
                                                            BNF
                                                                      4$
         000456
     185
                   000167
                             000612
                                                            JMP
                                                                     LD2X
     186
         000462
                   016767
                             000000G-000000G-4$:
                                                            MOV
                                                                     MSTRT, MSTR2
                                                                                                   ; REINITIALIZE · ADDRESS
     187
         000470
                   000755
                                                                      3$
     188
     189
    190
191
                                                           LOAD DATA MEMORY.
     192
         000472
                                                 LD2GD::
     193
         000472
                   016746
                             0000006
                                                                     CDHIGH,-(SP)
                                                           MOV
                                                                                                   :SUPPLY-UPPER-MEMOR平心1M科
     194
         000476
                   016746
                             000000G
                                                           MOV-
                                                                                                   LOWER LIMIT : PREPARE FOR LOAD
         000502
000506
     195
                                                           CALL
                                                                     BUFSET
     196
                    103002
                                                           BCC
                                                                     100$
                                                                                                   :NO ERROR, CONTINUE
         000510
                   000167
                             000560
                                                           JMP
                                                                     LD2X
     198
    199
         000514
                   005046
                                                 100$:
                                                           CLR
                                                                      -(SP)
                                                                                                   :START-MICROCODE-AT-0
    200 000516
201
                                                           CALL
                                                                     SECOS
    202
         000522
                   005046
                                                                                                   :REINHIBIT BRANCH CONTROL REGISTER
    203 000524
204
                                                           CALL
                                                                     CPCR
    205
         000530
                   012746
                             000377
                                                           MOV.
                                                                     #377,-(SP)
                                                                                                   :SET-MRP-MICRO-ADDRESS-=-X*FF* (JUMP-SELF)
    206
         000534
                                                           CALL
                                                                     SEQM14.
    207
    208 000540
                   005046
                                                           GLR.
                                                                     -(SP)
                                                                                                   :REINHIBIT BRANCH CONTROL REGISTER
    209
         000542
                                                           CALL
                                                                     MRPCR -
    210
    211
         000546
                   312767
                             001000
                                       176422
                                                           MOV.
                                                                     #Q$REBK,QR$CR2
                                                                                                   #RE-ARM INTERRUPTS #SET SEARCH MODE + ENABLE INTERRUPTS #CLEAR ALL SELECTIONS
    212-000554
213 000562
                   012767
                              120000
                                       176422
                                                           MOV-
                                                                     #<Q$SM+Q$ENOP>,QR$CR2
                   012746
                             000360
                                                                     #Q$CSEL,-(SP)
#<Q$LBD+Q$LBP>,(SP)
                                                           MOV
                   052716
052716
    214 000566
                             001001
                                                           BIS
                                                                                                   CLEAR DRIVE AND PULSE
CLEAR CP NO-CLOCK
SET NOTHING
    215 000572
216 000576
217 000600
                             030000
                                                           BIS
CLR
                                                                     #Q⊈CNC,(SP)
                   005046
                                                                      -(SP)
                                                           CALL
                                                                     CSR1
    218
219
        000604
                   032767
                             000000G-000000G
                                                           BIT
                                                                     #RP,BASE
                                                                                                   :REPEAT.PROMPT.?.
    220
         000612
                   901412
                                                           BEQ.
                                                                     2$
    221
222
223
         000614
                                                           CALL
                                                                     PDATA
                                                                                                   :READ DATA FROM COMMAND LINE
        .000620
000622
                   103434
                                                           BCS.
                                                                     LDCDX
                   102433
                                                           BVS
                                                                     LDCDX
                                                                                                   :<CR> RESPONSE
    224 000624
                                                           CALL
                                                                     LOADCD
    225 000630
226 000636
227
                                                                                                   :LOAD ONE WORD
                   966767
                             000000G · 000000G
                                                                                                   BUMP LOAD ADDRESS
                                                           ADD.
                                                                     INCVAL, MSTR2
                  000756
                                                                     1$
    228
                                                                                                                                                      83
                                                           PROMPT ONCE THEM FILL MEMORY
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CIA-RDP85-00514R000200020001-3

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CPLD - - - M
              0 M1110 27-MAR-80 14:43 PAGE 5-4
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    229
    230
         000640
                                                          CALL.
                                                                    PDATA
LDCDX
                                                                                                  ; PROMPT
    231
         000644
                   103422
                                                           BCS
                                                                                                  :END.OF.MEMORY.
:<CR> RESPONSE.
         000646
                   102421
                                                          BVS
    233
         000650
                                                          CALL
                                                                    LOADED
                                                                                                  :LOAD-1 WORD-
    234
         000654
                   966767
                             000000G · 000000G
                                                          ADD
                                                                    INCVAL, MSTR2
                                                                                                  : ADVANCE - ADDRESS
     235
         000662
                   026767
                             000000G · 000000G
                                                           CMP
                                                                    MSTR2.MEND
                                                                                                  :HAS UPPER MEMORY LIMIT BEEN REACHED
    236
237
         000670
                   101767
                                                          BLOS
                                                                    3$
                                                                                                  :NO, CONTINUE
         000672
                   032767
                             000000G - 000000G
                                                                    #LOOP, BASE
                                                          BIT
                                                                                                  :LOOP ON ?
     238
         000700
                   001404
                                                                    LDCDX-
                                                                                                  ;NO, EXIT
     239
         000702
                   016767
                             000000G · 000000G
                                                          MOV
                                                                    MSTRT, MSTR2
                                                                                                  :REINITIALIZE ADDRESS
     240
         000710
                   000757
    241
    242
         000712
                   005046
                                                 LDCDX:
                                                          CLR -
                                                                    -(SP)
                                                                                                 :CLEAR · NOTHING · IN · CSR1
:SET · NO-CLOCKS ·
         000714
    243
                   012746
                             176000
                                                                    #Q$MCLK,-(SP)
    244
         000720
                                                                    CSR1
                                                          CALL
    245
         000724
                   005067
                             176422
                                                                    QR$CR2
                                                                                                  SET LOAD MODE
                                                                                                                                             4 6
    246
         000730
                   000167
                             000340
                                                          JMP.
                                                                    LD2X
                                                                                                 ;EXIT-LOAD
    247
    248
                                                          LOAD-HRL-BUFFER-IN-MODULE-*CPBUG*
    249
    250
         000734
                                                 LD2HL::
         000734
000740
    251
                   016746
                             000000G
                                                          MOV
                                                                                                 #SUPPLY-UPPER-MEMORY LIMIT-
#SUPPLY-LOWER-MEMORY LIMIT-
#YERIFY-CURRENT-RANGE-
                                                                    HLHIGH, - (SP)
    252
                   016746
                             000000G
                                                          MOV.
                                                                    HLLOW, - (SP)
         000744
    253
                                                          CALL
                                                                    BUFSM-
    254
255
         000750
                   103551
                                                          BCS -
                                                                    LD2X
                                                                                                  :AN FRROR-
    256
         000752
                   032767
                            000000G · 000000G
                                                                                                 :REPEAT PROMPT:
:NO. FILL WITH ONE VALUE
                                                                    #RP,BASE
         000760
                   001421
                                                          BED
                                                                    3$
    258
         000762
                                                 1$:
                                                          CALL
                                                                                                 PROMPT.FOR.DATA.
                                                                    PDATA
    259
         000766
                   103002
                                                          BCC
                                                                    2$
         000770
    260
                   888167
                            000300
                                                          JMP
                                                                    LD2X
                                                                                                 :ERROR.OR.END.OF.MEMORY
:NOT.<CR> RESPONSE.
    261
         000774
                   102002
                                                2$:
                                                          BVC
                                                                    20$
    262
         000776
                   000167
                             000272
                                                                    LD2X
    263
    264 001002
                   016700
                             000000G
                                                20$:
                                                          MOV.
                                                                    MSTR2,R0
                                                                                                 :LOAD MEMORY ADDR (REALLY AN
         001006
                   016760
                             000000G 000000G
                                                          MOV.
                                                                    DATA1, HRL(R0)
                                                                                                 ;LOAD HRL TABLE
    266
         001014
                   066767
                             000000G · 000000G
                                                          ADD:
                                                                    INCVAL, MSTR2
                                                                                                  :BUMP OFFSET
    267
         001022
                   000757
                                                                                                 :PROMPT FOR NEXT VALUE
    268
    269
                                                          PROMPT ONCE THEN FILL MEMORY
                                                :
    270
    271
        001024
                                                3$:
                                                                                                 :PROMPT-FOR-VALUE-
:NOT-END-OF-MEMORY-
                                                          CALL
                                                                    PDATA:
    272
         001036
                   103002
                                                          BCC
                                                                    4$
    273
         001032
                   000167
                            000236
                                                          JMP.
                                                                    LD2X
                                                                                                 :ERROR ON PROMPT
    274
        001036
                   102002
                                                          BVC
                                                                    40$
                                                                                                 :NOT. <CR> RESPONSE
    275
         001040
                   000167
                            000230
                                                                    LD2X
    276
         001044
                   016700
                            имимимися
                                                          MOV
                                                                    MSTR2,R0
                                                                                                 :LOAD-ADDR (REALLY-AN-OFFSET)
                                                                                                 MOVE - VALUE - TO - HRL - IN - MEMORY
BUMP - TO - NEXT - ADDRESS -
    277
                   016760
         001050
                            000000G · 000000G ·
                                                          MOV
                                                                    DATA1, HRL(RØ)
    278
        001056
                   066767
                            000000G · 000000G
                                                          ADD.
                                                                    INCVAL, MSTR2
                                                                                                 ** INISHED ?
**NO. FILL NEXT LOCK TONK
REPEAT ?
**NO. EXIT
    279
        001064
                   026767
                            000000G · 000000G
                                                          CMP
                                                                    MSTR2, MEND
    280
        001072
                   101761
                                                          BLOS
        001074
    281
                   832767
                            лалалас · лалалас
                                                          BIT.
                                                                    #LOOP,BASE
    282.001102
                   001474
                                                          BEQ
                                                                    LD2X
    283 001104
284 001112
                  016767
                            000000G-000000G
                                                          MOV
                                                                    MSTRT, MSTR2
                                                                                                 :RE-INIT-START-ADDRESS-(OFFSET)
                  000751
```

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```
286
287
288
                                                       LOAD BCL BUFFER IN MODULE CPBUG
    001114
289
                                             LD2BL::
290
    001114
               016746
                         000000G
                                                       MOM
                                                                                               #SUPPLY-UPPER-MEMORY LIMIT
#SUPPLY-LOWER-MEMORY LIMIT
#YERIFY-CURRENT-RANGE-
                                                                 BLHIGH, - (SP)
291 001120
292 001124
               016746
                         000000G
                                                       MOV.
                                                                 BLLOW, - (SP)
                                                       CALL
                                                                 BUFSM
    001130
               103461
                                                       BCS
                                                                 LD2X
294
295
    001132
               832767
                         000000G · 000000G
                                                                                               REPEAT PROMPT:
NO. FILL WITH ONE VALUE
                                                                 #RP,BASE
296
     001140
               001421
                                                       BEQ.
     001142
297
                                             1$:
                                                       CALL
                                                                 PDATA
                                                                                               :PROMPT.FOR.DATA
298
    001146
               103002
                                                       BCC.
                                                                 2$
                                                                                               : NOT · END · OF · MEMORY:
299 001150
               000167
                                                       JMP
                                                                 LD2X
                                                                                               ;ERROR.OR.END.OF.MEMORY
;NOT.<CR> RESPONSE.
300 001154
               102002
                                             2$:
                                                                 20$
    001156
301
               000167
                         000112
                                                                 LD2X
302
303
     001162
               016700
                                                                 MSTR2.R0
                         000000G
                                                       MOV.
                                             20$:
                                                                                               ;LOAD MEMORY-ADDR ≪(REALLY AN OFFSET)
304 001166
305 001174
               016760
                         000000G · 000000G
                                                       MOV.
                                                                 DATA1, BCL (RØ)
                                                                                               LOAD BCL TABLE : BUMP OFFSET
               866767
                         000000G · 000000G
                                                                 INCVAL, MSTR2
306
    001202
              000757
                                                                                               : PROMPT · FOR · NEXT · VALUE
307
308
                                                       PROMPT ONCE THEN FILL MEMORY
309
310 001204
                                             3$:
                                                       CALL
                                                                 PDATA
                                                                                               :PROMPT.FOR.VALUE
    001210
               103002
                                                       BCC
JMP
                                                                 4$
                                                                                               : NOT · END · OF · MEMORY
312-001212
313 001216
               000167
                                                                 LD2X
                                                                                               :ERROR.ON.PROMPT.
:NOT.<CR> RESPONSE
               102002
                                             4$:
                                                       BVC
                                                                 40$
314 001220
315
               000167
                         000050
                                                                 LD2X
                                                                 MSTR2,R0
DATA1,BCL(R0)
                                                                                               *LOAD-ADDR (REALLY-AN-OFFSET)
*MOVE-VALUE-TO-BCL-IN-MEMORY-
*BUMP-TO-NEXT-ADDRESS-
316 001224
               016700
                         000000G
                                                       MOV.
317
     001230
               016760
                         лалалас, адалалас
                                                       MOV.
     001236
               066767
                         000000G · 000000G
                                                       ADD.
                                                                 INCVAL, MSTR2
319 001244
               026767
                         000000G · 000000G
                                                                 MSTR2, MEND
                                                       CMP
                                                                                               :FINISHED ?
328 881252
               101761
                                                       BLOS
                                                                 4$
                                                                                               ;HO, FILL HEXT LOCATION
321
    001254
               032767
                         000000G · 000000G
                                                                 #LOOP, BASE
                                                       BIT.
                                                                                               :REPEAT ?
322.001262
               001404
                                                       BEQ
                                                                 LD2X
                                                                                               :NO. EXIT:
;RE-INIT-START-ADDRESS-(OFFSET)
323 001264
324 001272
               016767
                         000000G · 000000G
                                                       MOV.
                                                                 MSTRT, MSTR2
               000751
                                                       BR
                                                                 4$
325
326
327
    001274
                                             LD2X:
    001274
328
               012746
                         000130
                                                       MOV
                                                                 #<CSWRTEN+PLD>,-(SP)
                                                                                               :WRITE - DISABL - SECT - D
329 001300
                                                       CLR
               005046
                                                                 -(SP)
                                                                                               :SET-NOTHING-
                                                                                                                                       FW.
330 001302
                                                       CALL
                                                                 CSR1
                                                                                                                                       FW.
331 001306
               042767
                        000000G-000000G
                                                       BIC.
                                                                 #RP,BASE
                                                                                               :CLEAR PROMPT REPEAT FLAG
332.001314
                                                       CALL
                                                                 KILL
                                                                                               :KILL AST
333 001320
               000167
                         000000G
                                                                 CPXX
```

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CPLD - - - M
     335
     336
337
                                                                 LOAD · CP · CONTROL · STORE ·
     338
     339
     340 001324
                                                      LOADCS:
     341 001324
                     316746
                                000000G
                                                                 MGM-
                                                                            MSTR2,-(SP)
                                                                                                            :SAVE - CURRENT - ADDRESS - IN - STACK
     342.001330
                                                                                                           SEQUENCE UP TO START ADDRESS:
SET WRITE ENABLE SECT A:
WRITE CP CONTROL REG:
SUPPLY SECT A DATA WORD:
SEND-IT TO CP - CLOCK SEQUENCER ONLY.
                                                                 CALL
     343
          001334
                     012746
                                000100
                                                                 MOV.
                                                                            #CSWRTEN,-(SP)
     344 001340
                                                                 CALL
                                                                            CPCRA.
     345 001344
                     016746
                                000000G
                                                                 MOV.
                                                                            DATA1,-(SP)
     346
          001350
     347
                                                                                                           :SAVE CURRENT ADDRESS IN STACK
:SEQUENCE UP TO START ADDRESS
:SET WRITE ENABLE SECT B
:DIRECT CNTL WORD TO CP
:MOVE DATA WORD TO LOD BUS REG
:SEND DATA TO CP - CLOCK SEQUENCER ONLY
     348
          001354
                     016746
                                000000G
                                                                 MOV.
                                                                           MSTR2,-(SP)
     349
          001360
                                                                 CALL
                                                                           SEQUS-
     350
          001364
                     012746
                                000110
                                                                 MOV
                                                                            #<CSWRTEN+PLB>.-(SP)
          001370
                                                                 CALL
                                                                            CPCRA-
     352.001374
                                000000G
                                                                 MOV.
                                                                           DATA2,-(SP)
     353 001400
                                                                 CALL
                                                                           LBCSC-
                                                                                                           :SAVE CURRENT ADDRESS IN STACK
:SEQUENCE UP TO START ADDRESS
:SET WRITE ENABLE SECT C
:DIRECT CNTL WORD TO CP
:MOVE DATA WORD TO LOD BUS REG
:SEND DATA TO CP - CLOCK SEQUENCER ONLY
     355
          001404
                     016746
                                000000G
                                                                 MOV-
                                                                           MSTR2,-(SP)
     356
          001410
                                                                 CALL
                                                                           SECOS
     357
          001414
                     012746
                                000120
                                                                 MOV.
                                                                            #KCSWRTEN+PLC>,-(SP)
          001420
                                                                 CALL
                                                                           CPCRA-
     359 001424
                     016746
                                000000G
                                                                 MOV.
                                                                           DATA3,-(SP)
     360 001430
                                                                CALL
                                                                           LBCSC
     361
                     016746
                                                                                                            :SAVE.CURRENT ADDRESS:IN.STACK
:SEQUENCE.UP.TO.START.ADDRESS:
:WRITE.ENABLE.SECTION.D.
:DIRECT.CNTL.WORD.TO CP.
                                000000G
                                                                           MSTR2,-(SP)
                                                                 MOV.
     363 001440
                                                                CALL
                                                                           SECOS
     364 001444
                     012746
                                                                            #<CSWRTEN+PLD>.-(SP)
                                000130
                                                                 MOV.
          001450
                                                                CALL
MOV
                                                                           CPCRA
                                                                                                            #DIRECT ON IL WORD TO LOT BUSINES : MOVE DATA WORD TO LOD BUSINES : SEND DATA TO CP - CLOCK SEQUENCER ONLY
     366 001454
                                                                           DATA4,-(SP)
     367
         001460
                                                                CALL:
                                                                           LBCSC
     368
     369
          001464
                     005046
                                                                                                            REINHIBIT BRANCH CONTROLTRÈS
                                                                CLR-
                                                                           -(SP)
     370 001466
                                                                CALL:
                                                                           CPCR
     371 001472
                     005046
                                                                CLR.
                                                                           -(SP)
     372-001474
                                                                           LBCP
                                                                                                            :SINGLE - CLOCK - TO - REINHIBIT - BRANCH - REGISTER -
     373 001500
                                                                RETURN -
     374
     375
     376
377
                                                                LOAD · CP · DATA MEMORY ·
                                                                                                                                           7
     379
         001502
                                                     LOADCD:
     380
         001502
                     012767
                               000003
                                           176424
                                                                MOV
                                                                           #Q$LDCD,QR$LBR
                                                                                                            :MOVE ATTH CODE TO LOD BUS REG
         001510
                                                                           #<Q$ATTN+Q$SM+Q$ENOP>,QR$CR2.;SET.ATTN.CODE.READY
     381
                     012767
                                120100
                                           176422
                                                                MOV-
     382.001516
                     016701
                                176422
                                                      1::
                                                                MOV
                                                                           QR$CR2,R1
                                                                                                           ;READ.CSR2
     383 001522
                     032701
                               000100
                                                                BIT.
                                                                           #Q$ATTH,R1
                                                                                                            :ATTN:CLEAR
     384 001526
385
                     001373
                                                                                                           NO. READ AGAIN
     386
         001530
                     016767
                               000000G-176424
                                                                MOV
                                                                           MSTR2.ORSI BR
    387 001536
                    012767
                                120040
                                                                           176422
                                                                MOV.
    388
         001544
                    016701
032701
                               176422
                                                     2$:
                                                                MOV
    389
         001550
                               000040
                                                                BIT
    390 001554
                    001373
                                                                BNF
                                                                           2$
                                                                                                            ; NO. READ AGAIN.
    391
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```

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```
392-001556
              012767
012767
                        000001
                                  176424
                                                     MOV-
                                                                #1.QR$LBR
                                                                                             ;TRANSFER COUNT - = 1 WORD
393 001564
                        120040
                                  176422
                                                     MOV.
                                                                #<Q$CCCP+Q$SM+Q$ENOP>,QR$CR2.;SET.CC.TO.CP.
394 001572
              016701
                        176422
                                                     MOV.
BIT.
                                            3$;
                                                               QR$CR2,R1
                                                                                             :READ CSR2
395 001576
              032701
                        000040
                                                               #Q$CCCP,R1
                                                                                             : IS CC . TO . CP . CLEAR
396 001602.
397
              001373
                                                     BHE
                                                               3$
                                                                                             :NO, READ-AGAIN-
                        000000G-176424
398 001604
              012767
                                                     MOV.
                                                               #DATA1.QR$LBR: ;CC:MEMORY DATA:BUFFER #<Q$CCCP+Q$SM+Q$ENOP>,QR$CR2:;SET:CC:TO:CP:
399 001612 012767
                        120040
                                                     MOV.
                                  176422
400
401
                                                     WAIT-FOR-INTERRUPT-FROM-CP-
402
403 001620
                                                     WTSE$S - #EFN.3
404
405 001632
                                                     CLEF$S: #EFN.3
406
407
                                                     RE-ARM. INTERRUPTS
408
409 001644
              012767
                        100400
                                  176422 ·
                                                     MOV.
                                                                #<Q$SM+Q$CHB>,QR$CR2.
                                                                                            :CLEAR · INTERRUPT · (USE · HIT · BUFFER · INT)
410 001652
              012767
                        101000
                                                               #<Q$SM+Q$REBK>,QR$CR2 ;RE+ARM
#<Q$SM+Q$ENBK+Q$ENDP>,QR$CR2 ;ENABLE
                                                     MOV-
411 001660
412 001666
413
              012767
                                                     MOV.
                                                     RETURN.
414
              000001
                                                     .END
```

ALUCKE= 040000 BYTE35= 000043 BYTE87= 000127 KILL = ******** GX** LBCP = ******** GX** Q\$CPCC=.000010 Q\$CP2.=.000260 Q\$CSC.=.010000 ALUOE:=:004000 A01 =:010000 BASE:=:******* C; BYTE36 = . 000044 BYTE88 - 000130 BYTE37= 000045 BYTE89= 000131 LBCSC = ******* GX BYTE38=:000046 BYTE9 = 000011 LDCDX-000712R 002 · Q\$CSEL = · 000360 =·****** GX BYTE39= 000047 BCL -BYTE90= 000132 LD2 000020RG 002 0\$CSET= 000002 002 0\$CSP = 02000* ŭINWD = ×××××× GX-BYTE4 = 000004 BYTE91= 000133 LD2BL -001114RG BITVAL = 000000 BYTE40= 0000050 BYTE92=-000134 LD2CD 000472RG 002 · O\$DMA · = · 000001 DITO = 0000001 BITI = 000002 BYTE41= 0000051 BYTE93=-000135 LD20S. 000272RG 002 Q\$ENBK= 040000 BYTE42= 000052 BYTE94= 000136 LD2HL · 000734RG 002 · Q\$ENOP = · 020000 BIT10 = 002000 BIT11 = 004000 BYTE43 = . 000053 BYTE95= 000137 LD2LN = 000004 G Q\$FAL - = - 004000 BYTE44= 000054 002 Q\$FC = 000045 002 Q\$F0 = 000044 BYTE96= 000140 LD2TBL 000000RG BIT12 -- 010000 BYTE45 = 000055 BYTE46 = 000056 BYTE97 = . 000141 LD2X-001274R BIT13 = 020000 BIT14 = 040000 BIT15 = 100000 BYTE98=-000142 LOADCD 001502R 002 - Q\$FP = 000046 BYTE47 = . 000057 BYTE99=-000143 002.Q\$HBF.=.000002 Q\$ICP.=.000006 LOADCS: 001324R BYTE48= 0000060 BYTVAL = . 000144 LOC.EN= 000100 BIT2 - - 000004 BYTE49 = 000061 BYTE5 = 000005 CBKALL = 001000 LOC:WA=.040000 LOC:WB=.100000 LOOP. =.********* GX: Q\$IHB = 000003 Q\$IHRL= 000002 = 000010 = 000020 CBKCLK= 000400 BIT4 BYTE50 - 000062 CDHIGH= ******* GX. = 000020 Q\$IMRP= AAAAA7 BIT5 BYTE51= 000063 MAREN1= 000001 MAREN2= 004000 Q\$LBD - - 001000 = 000100 BIT6 BYTE52= : 000064 CHOBRE = 100000 Q\$LBDP=-001001 = · 000200 = · 000400 BITZ BYTE53= 000065 CPCCEN= 010000 CPCR = ******** GX** CPCRA = ******** GX** MARLOD = 010000 Q\$LBP - = . 000001 Q\$LDCD = . 000003 ATTA: BYTE54= 000066 MAROUT = . 000002 = 001000 BIT9 BYTE55= 000067 BYTE56= 000070 MAR.LO= 002000 MAR.OU= 000040 Q\$LDMD= 000004 BLHIGH= · ******** GX · CPREAD = 040000 Q\$LDPP=.002000 Q\$LHP.=.010000 Q\$MNC.=.140000 BLLOW = · ****** G% BYTE57= 000071 CPWRTE = 020000 CPXX = ****** GX MBKALL = . 001000 BUFSET= ***** GX BYTE58= 000072 MBKCLK= 000400 BUFSM = ***** GX BYTE59= 0000073 CSADRD = 000004 Q\$MR = 000052 Q\$MR = 000040 Q\$MRP = 000040 Q\$MRP2 = 000240 Q\$MSC = 040000 MEND: = ******* GX: MMADRD= *000100 BUFS4 = ****** GX BYTE6 = 000006 CSEQCI = 100000 BYTE0 = 000000 BYTE1 = 000001 BYTE50= 000074 CSHIGH= · ********* GX MMLEFT= 000002 BYTE61= 0000075 CSLOW = ****** GX MM0E · = · 000004 BYTE10= 000012 CSOE· = 000040 CSR1 = ******** GX-BYTE62= 000076 BYTE63= 000077 MMURTE = . 000010 MNOBRE = . 100000 Q\$MSET= 000004 BYTE11=-000013 Q\$MSP - = 100000 MNUBRE = 100000 MREN1 = 000001 MRPCR = ******** GXMSTRT = ******* GXMSTR2 = ******* GXMSTR1 = ******** GXMSTR1 = 000040 N. = 000140 BYTE12= 000014 CSWRTE = 000100 DATA1 = ************ GX-DATA2 = *********** GX-BYTE64= 000100 Q\$NCLK + 176000 Q\$PP = 000100 BYTE13= 000015 BYTE65= 000101 BYTE14=-000016 BYTE66= 000102 BYTE67= 000103 Q\$PPSW= 000320 BYTE15= 000017 DATA3 = ****** GX Q\$PP2·=·000300 Q\$QHLT=·000013 BYTE16= 000020 BYTE17= 000021 BYTE68= 000104 DATA4 = - жжжжжжж GX-BYTE69= 000105 DBR.RD= 000001 Q\$QL = 000043 BYTE18= 000022 BYTE7 = 000007 BYTE70= 000106 DB\$CPP= 001457 DB\$SPT= 000026 = · 000144 = · ****** GX Ν. Q\$QLA - = - 000053 BYTE19=-000023 PACK+ Q\$QLB·=·000054 Q\$QLR·=·000001 Q\$QW =·000042 BYTE2 -- 000002 BYTE20 -- 000024 DB\$TPC=-000025 DISPGS=-100002 BYTE71= 000107 PDATA = ********* GX-BYTE72= 000110 BYTE73= 000111 PLB = 000010 PLC = 000020 BYTE21 = 000025 DMAAUR = . 000005 Q\$RDCD=-000005 BYTE22= 000026 BYTE74= 000112 DMARRD= . 000003 PLD. = . 000030 Q\$RDMD= 000006 Q\$REBK= 001000 Q\$REC = 006000 Q\$RSC = 004000 8YTE23 = 000027 8YTE24 = 000030 BYTE75= 000113 DMARWR = 000004 PLRWR - - 000200 BYTE76=-000114 BYTE77=-000115 EFN.3 = ****** GX PLR.EN= 000200 BYTE25= 000031 ENBR: =:010000 QR\$CR1= 176420 QR\$CR2= 176422 9YTE26=-000032 BYTE78= 000116 ERR11 = ******** GX-ERR4 = ******* GX-ERR5 = ******* GX-Q\$RSET= 000010 Q\$SM = 100000 Q\$SP = 000120 BYTE27 = 000033 BYTE28 = 000034 BYTE79= 000117 QR\$LBR= 176424 BYTE8 = 000010 Q\$ATTN= 000100 Q\$BCL = 000001 Q\$CCCP= 000040 BYTE29=-000035 BYTE3 =-000003 BYTE30=-000036 BYTE80= 000120 Q\$SP2 = 000340 RGQ.EN = 000200 BYTE81= 000121 BYTE82= 000122 = ****** GX HANG Q\$CHB -- 000400 BYTE31=-000037 BYTE83 = . 000123 HLHIGH= · ***** GX Q\$CHRL= .000200 RP. = - жжжжжжж GX BYTE32= 000040 BYTE33= 000041 BYTE84= 000124 HLLOW- = · ****** GX-Q\$CLR - = - 000040 RTNPT - - ****** GX BYTE85= 000125 HR! = - ********* GX -Q\$CNC - = - 030000 SCAN = · ****** GX BYTE34= 000042 INCVAL = ***** GX BYTE86= 000126 РИВИТАБ INCVAL = жижжик БХ. 0\$CP. = 000060 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3

```
SYMBOL TABLE
                                         Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
SEQMM- = · ***** GX-
                              T$F$AA=:000000
                                                            WORD12=-000030
                                                                                          WORD42= 999124
                                                                                                                        WORD72= 000220
                              T$F$AB=-000004
T$F$AC=-000014
                                                            WORD13= 000032
WORD14= 000034
SEQ.CI= 000010
                                                                                          WORD43= 000126
                                                                                                                        WORD73= 000222
S$CLR - = - 000000
                                                                                          WORD44=-000130
                                                                                                                        WORD74= 000224
                              T$FSB2= 0000010
                                                            WORD15= 000036
                                                                                          MORD45=-000132
                                                                                                                        WORD75=-000226
                              T$IB: =:000026
T$IBAR=:000024
S$QB · = · 000005
                                                            WORD16= 000040
                                                                                          WORD46= 000134
                                                                                                                        WORD76= 000230
WORD77= 000232
WORD78= 000234
S$0R · = · 000006
                                                            WORD17= 000042
                                                                                          WORD47= 000136
S$QX
       = 0000004
                              T$IBE - = - 020000
                                                            WORD18 = 000044
                                                                                          WORD48= 000140
      = 0000007
                              T$IBF - = - 040000
S#SR -
                                                            WORD19= 000046
                                                                                          WORD49= 000142
                                                                                                                        WORD79= 000236
WORD8 = 000236
S$51
      = 000010
                              T$ICD -= -000040
                                                            WORD2 - - 000004
                                                                                          WORD5 = 000012
       =·000014
S$S2
                              T$MODE = . 004000
                                                            WORD20= 000050
                                                                                          WORD50 = . 000144
                                                                                                                        WORD80= 0000240
TD$CTR=-176370
                              T$0B. = 000036
T$0BE. = 004000
T$0BF. = 010000
                                                            WORD21 = . 000052
WORD21 = . 000054
                                                                                          WORD51=.000146
                                                                                                                        WORD81=-000242
TD$CTU= 176360
TD$INL= 004000
                                                                                          WORD52 = 000150
                                                                                                                        WORD82= 000244
                                                            WORD23= 0000056
                                                                                          WORD53= 000152
                                                                                                                        WORD83= 000246
TD$MEM= . 000270
                              T$0BRA= 000034
                                                            WORD24= 000060
                                                                                          WORD54= 000154
                                                                                                                        WORD84= 000250
TD$0AR= 176344
TD$0TR= 176346
                              T$0BWA= 000032
                                                            WORD25= 000062
                                                                                          UORD55= 000156
                                                                                                                        WORD85=-000252
                              T$0UTA= 100000
T$RBD0= 000200
                                                            WORD26= 000064
                                                                                          WORD56= 000160
                                                                                                                        WORD86 = 000254
TD$QRD= 000274
                                                            WORD27= 000066
WORD28= 000070
                                                                                          WORD57= 000162
                                                                                                                        WORD87= 000256
TD$5W-=-176376
                              T$RNB - = 000040
                                                                                          MORD58= 000164
                                                                                                                        WORD88= 000250
TD$TAR= 176372
                              T$RSET= . 040000
                                                            WORD29 = 0000072
                                                                                          WORD59= 000166
                                                                                                                        WORD89≕ 000262
TD$TAW= 176362
                              T$SC: =:000022
T$SCLK=:020000
                                                            WORD3 = 000006
WORD30= 000074
                                                                                          WORD6 = 000014
                                                                                                                        WORD9 = 0000022
TD$TDR= · 176374
                                                                                          WORD60=-000170
WORD61=-000172
                                                                                                                        WORD90=.000264
TD$TDW= · 176364
                              T$SEG! = 000000
                                                            WORD31 = 000076
                                                                                                                        WORD91= 000266
WORD92= 000270
T$AD - - 000020
T$BA - - 000002
                              T$SEG2=-000001
                                                            WORD32= 000100
                                                                                          WORD62=-000174
                              T$SEG3=:000002
                                                            WORD33=-000102
                                                                                          WORD63=-000176
                                                                                                                        WORD93= 000272
T$BD· = 000010
                              T$SC - - 000001
                                                            WORD34= 000104
                                                                                          WORD64= 000200
                                                                                                                        WORD94= 000274
T$BSO - = - 100000
                              T$UBUS = 100000
                                                            WORD35= 000106
                                                                                          WORD65 = - 000202
                                                                                                                        WORD95=-000276
T$8T. = 0000020
                              T$1CLK=-000400
                                                            WORD36=-000110
                                                                                          WORD66 = 000204
                                                                                                                        WORD96 = 000300
WORD97 = 000302
T$BTAR = . 000030
                              T$8BEN= · 000020
                                                            WORD37= 000112
                                                                                          WORD67 = . 000206
T$BTD - = - 002000
                              UBD: IN= 0000020
                                                            WORD38 = . 000114
                                                                                          WORD68= 000210
                                                                                                                        WORD98 = · 000304
                              WORD1 = 000002
WORD1 = 000002
T$CD - - 000100
                                                            WCRD39=-000116
                                                                                          WORD69= 000212
WORD7 = 000016
                                                                                                                        WORD99=.000306
T$CLK - = - 002000
                                                            WORD4 = 000010
                                                                                                                        WRDVAL = . 000310
T$DISK=:000200
                              WORD10=-000024
                                                            WORD40=-000120
                                                                                          WORD70= 000214
                                                                                                                         XTREAD= 001000
TEDED: = : 000004
                              WORD11=-000026
                                                            WORD41=-000122
                                                                                          WORD71=-000216
                                                                                                                        XTWRTE = 000400
T$EMEM= . 010000
. ABS.
          природа
                        000
          000000
                        001
CPLD
                        002
          001670
ERRORS DETECTED:
                      0
VIRTUAL-MEMORY-USED: 3677 WORDS- (-15 PAGES)
DYNAMIC-MEMORY: 4916 WORDS- (-18 PAGES)
ELAPSED-TIME: 00:00:51
CPLD, GPLD/-SP=[20,13IM, [20,13CPLD
```

CPLD....MACRO.M1110 27-MAR-80 14:43 PAGE:6-3

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MACRO MI110 27-MAR-80 14:44 PAGE 5
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CPPR-
                                                                     .#ITLE-GRPR-
.PSECT-CPPR-
        23
           000000
        4567
                                                                    MARDWARE QUERY RESOLVER MANUAL DEBUGGING AIDS CONTROL PROCESSOR TEST ROUTINES.
                                                                     ****
                                                                                 PROTOTYPE · VERSION ·
        89
                                                                     COMMANDS:
       10
                                                                               PRINT-CP-MEMORY-CONTENTS
       11
       12
13
                                                                    ONCE A COMMAND HAS BEEN EXECUTED (OR AN ERROR ENCOUNTERED) THIS MODULE RETURNS CONTROL TO THE MODULE CP AT LOCATION
       14
                                                                     'CPXX'.
       15
       16
17
                                                            ***************
       19
                                                                    NOTE:
                                                                    THE COMMAND TO PRINT CP DATA MEMORY CANNOT BE USED UNLESS MRP MICROPROGRAM MEMORY AND CP CONTROL STORE HAVE BEEN LOADED VIA THE LOADER PROGRAM.
       28
21
       22
23
24
25
26
27
28
29
                                                            *****
                                                                     .MCALL WTSE$S.CLEF$S
       30
31
32
33
34
35
36
                                                                     \begin{tabular}{l} TABLE \cdot OF \cdot VALID \cdot CP \cdot MEMORY \cdot MNEMONICS \cdot AND \cdot ADDRESSES \cdot OF \cdot ASSOCIATED \\ ROUTINES \cdot \end{tabular} 
           000000
                                                         PR2TBL::
           000000
                                       123
                                                                     .ASCII
                                                                                Z08Z
                                                                                                                  :PRINT-MICROPGM-MEMORY
           000002
                       0003121
                                                                     .WORD
                                                                               PRZCS
           000004
                      103
000632
                                      104
                                                                     .ASCII
                                                                                /CD/
                                                                                                                  :PRINT DATA MEMORY
       37
           000006
                                                                                PR2CD
                                                                     .WORD
                       000002
                                                         PR2LH
                                                                                <.-PR2TBL>/4
       39
40
                                                                    PRINT-BUFFER
       41
       42
           000010
                                                         Ṕ82TBL∶∶
                                                                                                                  PRINT HIT BUFFER
       43
           000010
                           110
                                       102
                                                                     .ASCII
                                                                                /HB/
           000012
                       001314
       44
                                                                     .WORD
                                                                                PB2HB
       45
           000014
                           110
                                       114
                                                                     .ASCII
                                                                                /HL/
                                                                                                                  PRINT HRL
       46
           000016
                       001406
                                                                     .WORD
                                                                                PB2HL
       47
           000020
                           102
                                       114
                                                                     .ASCII.
                                                                                                                  PRINT BOL
                                                                                ZBLZ
      48
49
50
52
53
54
55
56
57
           000022
                       0015001
                                                                     .WORD
                                                                                PB2BL
                       000003
                                                         PB2LN
                                                                                <.-PB2TBL>/4
                                                                    PRINT-
                                                                    PERFORM THIRD LEVEL PARSING EG. IN THE COMMAND: PRSPR CD 0
                                                                    PARSE THE CO
                                               Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3
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0-M1110 27-MAR-80 14:44 PAGE-5-1
                                         Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3
      000024
                                                    PR2::
  60
      000024
                                                               CALL
                                                                           FIND
1$
                                                                                                             #LOCATE MEMORY MNEMONIC IN COMMAND LINE #OK. CONTINUE
 61
      000030
                 103004
                                                               BCC.
 62
      000032
                                                                CALL
                                                                           ERR4
                                                                                                              ; 'MISSING OPERAND:
 63
      000036
                 000167
                                                                JMP.
                                                                           PR2X
                                                                                                             :EXIT-
 64
      000042
                 012700
 65
                             000002
                                                               MOV.
                                                                           #PR2LN,R0
                                                                                                             : NUMBER OF TABLE ENTRIES : POINT TO TABLE
 66
      000046
                 012702
                             000000
                                                                MOV.
                                                                           #PR2TBL,R2
      000052
                                                                CALL
                                                                           SCAN
                                                                                                             : MATCH AGAINST COMMAND LINE
                                                                                                         MATCH WAS MADE: "INVALID MEMORY MNEMONIC:
 68
     000056
                 103004
                                                               BCC.
                                                                           2$
 69
70
71
      000060
                                                                           ERR7
                                                                CALL
                 000167 001136
      000064
                                                                           PR2X
 72
73
74
                                                               SAVE POINTER TO ROUTINE ASSOCIATED WITH THE MEMORY MNEMONIC. SCAN THE REMAINDER OF THE COMMAND LINE FOR CONTROL INFORMATION:
  75
76
77
                                                                   START ADDRESS ONLY, PRINT ONE MEMORY LOCATION.
                                                                    CP>PR+CD+0
                                                                    START ADDRESS, LOOP INDICATOR, LOOP ON THE READING OF THIS ONE MEMORY LOCATION ONLY. PRINT THE CONTENTS ONLY.
  79
                                                                    ONCE:
  80
                                                                    GP>LD-CD-0 L-
  81
                                                                   START ADDRESS, END ADDRESS, NO LOOP, PRINT THE CONTENTS OF MEMORY BETWEEN THE START AND END ADDRESSES.
 82
                                                                   OF MEMORY BETWEEN THE STHKT HAVE ENVIRONMENDED.

(CP>PR.CD.0 7

START ADDRESS, END ADDRESS, LOOP INDICATOR: READ THE CONTENTS

OF MEMORY BETWEEN THE START AND END ADDRESSES. HOWEVER, PRINT.

ONLY THE CONTENTS OF MEMORY AT THE START ADDRESS.

(CP>PR.CD.0 7 L.
 83
 85
 86
 88
 89
  90
     000070
                 010167
                            000000G
                                                    2$:
                                                                          R1.RTHPT
                                                               MOV
                                                                                                             :SAVE POINTER
 91
      000074
                                                                          FIND
                                                               CALL
                                                                                                             :LOCATE NON-BLANK IN COMMAND LINE
 92
     000100
                 103004
                                                               BCC.
                                                                           34
 93
     000102
                                                               CALL
                                                                          ERR4
                                                                                                              MISSING OPERAND:
 94
      000106
                 000167
                            001114
                                                               JMP.
                                                                           PR2X
                                                                                                             :EXIT
 95
     000112
                                                                                                             CONVERT COMMAND LIME VALUE TO BINARY.
                                                   3$:
                                                               CALL
                                                                          PACK
 96
     000116
                 103004
                                                               BCC:
                                                                           4$
 97
      000120
                                                               CALL
                                                                          ERR5
                                                                                                             : INVALID NUMERIC VALUE
 98
     000124
                 000167
                            001076
 99
     000130
199
                 016767
                             000000G 000000G 4$:
                                                                          BINWD,MSTRT
BINWD,MSTR2
                                                               MOV.
                                                                                                             ;SAVE-PRINT-START-ADDRÉSS
;SAVE-IT-TWICE-
;INIT-END-ADDRESS-
101
     000136
                 016767
                            000000G 000000G
                                                               MOV-
102
     000144
                 012767
                            177777
                                        000000G
                                                               MOV:
                                                                          #-1,MEND
103
                                                              START ADDRESS HAS BEEN FOUND: SCAN FOR END ADDRESS OR LOOP INDICATOR (CONDITIONS 2, 3 ABOVE). IF THERE IS NOTHING FURTHER IN THE COMMAND LINE, CONDITION 1 IS IN EFFECT:
104
105
106
107
108 000152
                                                                                                            SCAN COMMAND LINE
SOMETHING THERE
SET END ADDR - START ADDR
JUMP TO RTN
                                                               CALL
                                                                          FIND
     000156
189
                 103004
                                                               BCC
                                                                          5$
110 000160
                 016767
                            000000G · 000000G
                                                               MOV
                                                                          MSTRT, MEND
111
     000166
                000445
                                                               BR
                                                                           9事
112
113 000170
                122711
                            000114
                                                   5$:
                                                               CMPB
                                                                          #*L,(R1)
                                                                                                             :LOOP · INDICATOR · :NO. MUST · BE · UPPER · ADDRESS
114 000174
                001011
                                                               BNE .
                                                                          6$
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```

CPPR-

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MACRO M. 110 27-MAR-80 14:44 PAGE 5-2. Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
CPPR-
                                                                                               #SET-FLAG-FOR-OUTPUT CONTROL #SET-END-ADDR: =-START-ADDR:
     115 000176
                   052767
                            000000G · 000000G
000000G · 000000G
                                                                   #OUT,BASE
     116 000204
                   016767
                                                         MOV.
                                                                   MSTRT, MEND
         000212
                                                         CALL
                                                                  HANG
                                                                                               :HOW TO STOP LOOP
     118 000216
                  000431
                                                                   9$
                                                                                               :JUMP . TO . RTN .
     119
     120
         000220
                                               6$:
                                                         CALL
                                                                  PACK
                                                                                               CONVERT UPPER ADDRÉSS....
     121
         000224
                   103004
                                                         BCC-
                                                                   74
     122-000226
                                                                                               : INVALID NUMERIC
                                                         CALL
                                                                  ERR5
     123
         000232
                  000167
                            000770
                                                                                               :EXIT
                                                         SAVE END ADDRESS (BINARY)
CHECK FOR LOOP INDICATOR AFTER END ADDRESS (CONDITION 4)
     125
     126
                                                                                               :SET-UP-END ADDRESS:
:CHECK-FOR LOOP-INDICATOR
     128-000236
                   016767
                            000000G 000000G 7$:
                                                         MOV
                                                                  BINWD, MEND.
     129
         000244
                                                         CALL
                                                                  FIND
         000250
                   103414
                                                         BCS
                                                                   9$
                                                                                               :NO-LOOP-
     131
         000252
                   122711
                            000114
                                                         CMPB
                                                                  #*Lx(R1)
                                                                                               CORRECT LOOP INDICATOR
     132 - 999256
                   001404
                                                         BEQ.
                                                                  8$
                                                                                               ; YES -
         000260
                                                         CALL
                                                                  ERR11
     134
         000264
                   000167
                                                                  PR2X
#OUT, BASE
                            000736
                                                         JMP -
     135 000270
                            000000G-000000G-8$:
                                                         BIS.
                                                                                               :SET-OUTPUT-CONTROL
     136
         000276
                                                                  HANG
                                                                                               :HOW-TO-STOP-LOOP
     138 000302-
                  016701
                                                         MOV.
                                                                  RTHPT,R1
                                                                                               :POINT.TO.ROUTINE.
     139
         000306
                  000171
                            000000
                                                                  @(R1)
     140
     141
     142
                                                         PRINT-FROM-CONTROL-STORE-
     143
     144
         000312
     145
         000312
                   005046
     146
                                                                  -(SP)
                                                                                               :CLEAR - NOTHING
     147
         000314
                   012746
                            000002
                                                         MOV
                                                                  #Q$CSET,-(SP)
                                                                                               :CP·RESET
         000320
                                                         CALL
                                                                  CSR1
                                                                                               :DO:IT:
     149
         000324
                   012746
                            000002
                                                        MOV.
                                                                  #Q$CSET,-(SP)
                                                                                               :CLEAR · CP · RESET ·
     150
         000330
                   005046
                                                         CLR -
                                                                  -(SP)
                                                                                               :SET - NOTHING -
     151 000332
                                                         CALL
                                                                  CSR4
     152
     153 000336
                  016746
                            000000G
                                                                                               ;SUPPLY-UPPER-MEMORY LIMIT-
                                                         MOV.
                                                                  CSHIGH,-(SP)
     154 000342
                   016746
                            000000G
                                                         MOV.
                                                                  CSLOW_* - (SP)
                                                                                               :LOWER LIMIT
                                                                  BUFS4
     155
         000346
                                                         CALL.
                                                                                               :PREPARE · FOR · LOAD ·
                   103002
     156
         000352
                                                         BCC
                                                                  1$
                                                                                               :NO · ERROR ·
     157
         000354
                  000167
                            000646
                                                         9ML
                                                                  PR2X
     159
         000360
                   316746
                                                                  MSTR2,-(SP)
                                                                                              #SEND CURRENT ADDRESS #SEQUENCE UP TO PRINT START ADDRESS #SELECT CALL STORE SECT A
     160
         000364
     161
         000370
                  012746
                            000040
                                                        MOV .
                                                                  #CSOE,-(SP)
     162.000374
                                                         CALL
                                                                  CPCR
                                                                                               :SET . CP . CNTL . REG .
    163 000400
                  005046
                                                                   -(SP)
     164 000402
                                                         CALL
                                                                                              #CLOCK TO RESET BR REG FF #
#REQUEST CP TO LOD BUS #
#SAVE FOR PRINTING
     165
         000406
                                                        CALL
                                                                  CPLB
    166 000412 012667
                            000000G
                                                        MOV.
                                                                  (SP)+,DATA1
    167
    168 000416
                  016746
                            000000G
                                                        MOV-
                                                                  MSTR2,-(SP)
                                                                                           SEND CURRENT ADDRESS
SEQUENCE UP TO PRINT START ADDRESS
    169
                                                                  SECCS:
#<CSOE+PLB>,-(SP)
                                                        CALL
    170 000426
171 000432
                  012746
                            000050
                                                        MOV.
                                                                          CALL
                                       Approved For Release 2005/07/1
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10 M1110 27-MAR-80 14:44 PAGE 5-3
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 172 - 000436
               005046
                                                       CLR.
                                                                 -(SP)
173 000440
                                                                                               :CLOCK-TO-REINHIBIT-BR-
:REQUEST-CP-TO-LOD-BUS-
                                                       CALL
                                                                 LBCP
174
     000444
                                                       CALL
                                                                 CPL B.
175
     000450
               012667
                         000000G
                                                       MOV-
                                                                 (SP)+,DATA2
                                                                                               :SAVE FOR PRINTING
176
                                                                                               :SEND CURRENT ADDRESS:
:SEQUENCE UP TO PRINT START ADDRESS:
:SELECT CNTL STORE SECT C
     000454
               016746
                         000000G
                                                       MOV.
                                                                 MSTR2,-(SP)
178
     000460
                                                       CALL
                                                                 SERCS
179
     999464
               012746
                         000060
                                                       MOV-
                                                                 #<CSOE+PLC>,-(SP)
 180
     000470
                                                       CALL
                                                                 CPCR
                                                                                               :SET-CP-CNTL-REG
     000474
 181
               005046
                                                       DIR.
                                                                  (SP)
 182 000476
                                                                                               ;CLOCK·TO·REINHIBIT·BR
;REQUEST·CP·TO·LOD·BUS
;SAVE·FOR·PRINTING·
                                                       CALL
                                                                 LBCP
183 000502
                                                                 CPLB
                                                       CALL
 184
     000506
               012667
                                                                 (SP)+,DATA3
                         000000G
                                                       MOV-
 185
     000512
 186
               016746
                         000000G
                                                                 MSTR2,-(SP)
                                                                                               :SEND CURRENT ADDRESS
:SEQUENCE UP TO PRINT START ADDRESS
:SELECT CHIL STORE SECT D
                                                       MOV
 187
     000516
                                                       CALL
                                                                 SEQUS
     000522
               012746
                         000070
                                                       MOV.
                                                                 #<CSOE+PLD>,-(SP)
 189
     000526
                                                       CALL
                                                                 CPCR
                                                                                               :SET · CP · CNTL · REG ·
 190
     000532
               005046
                                                       CLR-
                                                                 -(SP)
     000534
                                                       CALL
                                                                 LBCP
                                                                                               ;CLOCK·TO·REINHIBIT·BR
;REQUEST·CP·TO·LOD·BUS
192 000548
                                                       CALL
                                                                 CPL B
     000544
193
               812667
                         000000G
                                                       MOV
                                                                                               SAVE FOR PRINTING CLEAR CP CONTROL REG
                                                                 (SP)+,DATA4
     000550
               005046
                                                       CLR
                                                                  -(SP)
 195
     000552
                                                       CALL
                                                                 CPCR
196
     000556
                                                       CALL
                                                                 PRDATA:
                                                                                              :PRINT MEMORY CONTENTS
198
     000562
               103002
                                                       BCC
                                                                 100$
                                                                                              :NOT.END.OF.MEMORY.
 199
     000564
               000167
                         000436
                                                       JMP
                                                                 PR2X
200
201 000570
               066767
                         000000G 000000G 100$:
                                                       ADD
                                                                 INCVAL, MSTR2
                                                                                               :ADVANCE · ADDRESS ·
202
     000576
               026767
                         000000G-000000G
                                                       CMP
                                                                 MSTR2, MEND
                                                                                              :HAS-UPPER MEMORY-LIMIT-BEEN-REACHED
203
     000604
               101665
                                                                                               :NO, CONTINUE
                                                       BLOS
                                                                 1$
204
    000606
               032767
                         000000G-000000G
                                                                 #LOOP, BASE
                                                       BIT.
                                                                                               :LOOP.ON.?
                                                                                                                               eun 'a y
               001002
295
    000614
                                                       BNE
                                                                 2885
                                                                                               :YES, CONTINUE.
206
     000616
               000167
                         000404
                                                                                              :NO. EXIT:
:INIT-START-ADDRESS
                                                                 PR2X
               016767
                         000000G 000000G 200$:
207
     000622
                                                       MOV.
                                                                 MSTRT, MSTR2
208
209
     000630
                                                       BR
                                                                 1$
                                                                                               : AND . REPEAT . PRINT.
210
211
                                             .
                                                      PRINT FROM DATA MEMORY
212
213
     000632
                                             PR2GD::
214
     000632
               016746
                        ABBBBBB
                                                       MOV
                                                                 CDHIGH, - (SP)
                                                                                              :SUPPLY MEMORY UPPER LIMIT
215
     000636
               016746
                         000000G
                                                       MOV.
                                                                 CDLOW, - (SP)
216
217
     000642
                                                       CALL
                                                                BUFSET.
                                                                                               ; PREPARE · FOR · LOAD
     000646
               103002
                                                                 100$
                                                                                              :OK, CONTINUE
218
219
               000167
    000650
                        000352
220 000654
221 000656
               005046
                                             100$:
                                                      CLR.
                                                                 -(SP)
                                                                                              :START-MICROCODE-AT-0
                                                                 SECCS
                                                                                              REINHIBIT BRANCH CONTROL REG
223 000662
224 000664
    000662
              305046
                                                      GLR.
                                                                 -(SP)
                                                                CPCR
                                                      CALL
225
    000670
              005046
                                                      CLR
                                                                 -(SP)
226
    000672
                                                                                              #SINGLE CLOCK: TO REINHIBIT BRANCH REGISTER #SET MRP MICRO ADDRESS = X*FF* (JUMP SELF)
                                                      CALL
                                                                LBCP
227 000676
              012746 000377
                                                      MOV
                                                                 #377,-(SP)
228 000702
                                                      CALL
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CPPR-

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CPPR-
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        229
                                                                                                                                                                                :REINHIBIT BRANCH-CONTROL-REG-
        230
                 000706
                                   005046
                                                                                                          GLR
        23 i
                 000710
                                                                                                          CALL
                                                                                                                           MRPCR
        232.000714
                                   005046
                                                                                                          CLR.
                                                                                                                            -/SP1
                                                                                                                                                                                :SINGLE CLOCK TO REINHIBIT BRANCH REGISTER:
:RE-ARM INTERRUPTS
:SET SEARCH MODE + ENABLE INTERRUPTS
                000716
                                                                                                          CALL
        233
                                                                                                                           LBMRP
                000722
                                                                                                          MOV.
                                                     001000
                                                                      176422
                                                                                                                            #Q$REBK,QR$CR2
        235
                000730
000736
                                   012767
                                                     120000
                                                                       176422
                                                                                                          MOV
                                                                                                                            #<Q$SM+Q$ENOP>.QR$CR2
        236
                                   012746
                                                     000360
                                                                                                          MOV.
                                                                                                                            #Q$CSEL,-(SP)
#<Q$LBD+Q$LBP>,(SP)
                                                                                                                                                                                 :CLEAR ALL SELECTIONS
        237
                 000742
                                   052716
                                                     001001
                                                                                                          BIS.
                                                                                                                                                                                :CLEAR DRIVE AND PULSE
:CLEAR CP NO-CLOCK
        238
                000746
000752
000754
                                   052716
                                                                                                                            #Q$CNC,(SP)
                                                                                                                            -(SP)
        239
240
                                   005046
                                                                                                          CLR
                                                                                                                                                                                 :SET-NOTHING
                                                                                                          CALL
                                                                                                                           CSR I
         241
                                                                                                                            #Q$RDCD,QR$LBR ;MOVE.ATTN_CODE.TO.LOD.BUS.REG
#<Q$ATTN+Q$SM+Q$ENOP>,QR$CR2.:SET.ATTN.CODE.READY
QR$CR2,R1 ;READ_CSR2
        242 000760
                                   012767
                                                     000005
                                                                       176424
                                                                                        PRCD:
                                                                                                          MOV-
                000766
000774
        243
                                   812767
                                                     120100
                                                                      176422
                                                                                                          MOV:
                                   016701
                                                     176422
                                                                                         15:
                                                                                                          MOV.
                                                                                                                           DR4CR2.R1
         245
                 001000
                                   032701
                                                                                                          BIT.
                                                                                                                                                                                 :ATTH-CLEAR
                                                                                                                            #Q$ATTN,R1
        246
247
                 001004
                                   001373
                                                                                                                                                                                ;NO, READ-AGAIN-
         248
                 001006
                                   016767
                                                     000000G-176424
                                                                                                          MOV
                                                                                                                           MSTR2,QR$LBR
                                                                                                                                                                                 CD-MEMORY START ADDRESS
         249
                 001014
                                   012767
                                                     120040
                                                                     176422
                                                                                                          MOV
                                                                                                                            #<Q$CCCP+Q$SM+Q$ENOP>,QR$CR2.;SET.CC.TO.CP.
         250 001022
                                   016701
                                                     176422
                                                                                         2$:
                                                                                                          MOV-
                                                                                                                            QR$CR2,R1
                                                                                                                                                                                 :READ CSR2
         251
                 001026
                                   032701
                                                     000040
                                                                                                          BIT.
                                                                                                                            #Q$CCCP,R1
                                                                                                                                                                                 ; IS - CC - TO - CP - CLEAR
                 001032
         252
                                   001373
                                                                                                                            2$
                                                                                                                                                                                 :NO. READ AGAIN
         253
                                                                                                                            #1.QR$LBR: ;TRANSFER:COUNT:=:1 WORD #<Q$CCCP+Q$SM+Q$ENOP>.QR$CR2:;SET:CC:TO:CP:
         254
                 001034
                                   012767
                                                     000001
                                                                       176424
         255
                 001042
                                   012767
                                                     120040
                                                                      176422
                                                                                                          MOV.
         256
                 001050
                                   016701
                                                     176422
                                                                                         3$:
                                                                                                          MOV.
                                                                                                                            QR$CR2,R1
                                                                                                                                                                                 :READ.CSR2
                                                                                                                                                                                 ; IS · CC · TO · CP · CLEAR
; NO , READ · AGAIN ·
                  001054
                                   032701
                                                     000040
                                                                                                          BIT
                                                                                                                            #Q$CCCP,R1
         258 001060
                                                                                                          BNE
         259
                 001062
                                   012767
                                                     000000G · 176424
         260
                                                                                                          MOM
                                                                                                                            #DATA1.QR$LBR
                                                                                                                                                                                 ;CC·MEMORY DATA-BUFFER
                                   012767
         261 001070
                                                      120040 176422
                                                                                                          MOV
                                                                                                                            #KQ$CCCP+Q$SM+Q$ENOP>,QR$CR2.;SET.CC.TO.CP
         262
          263
                                                                                                          WAIT-FOR-INTERRUPT-FROM-CP
         264
         265 001076
                                                                                                          WTSE$S: #EFN.3
         266
                 001110
                                                                                                          CLEF$S: #EFN.3
          268
          269
                                                                                                          RE-ARM-INTERRUPTS
          270
         271
                  001122-
                                   012767
                                                      100400
                                                                       176422
                                                                                                                            #<Q$SM+Q$CHB>,QR$CR2
                                                                                                                                                                                 :CLEAR INTERRUPT (USE HIT BUFFER INT)
                                                                                                                            #<Q$SM+Q$REBK>.OR$CR2- ;RE-ARM-
#<Q$SM+Q$ENBK+Q$ENOP>.QR$CR2-;ENABLE
         272
                 001130
                                   012767
                                                      101000
                                                                       176422
                                                                                                          MOV
                 001136
                                   012767
                                                      160000
                                                                       176422
                                                                                                                                                                                                                      *:200
         275 001144
276 001150
                                                                                                                                                                                 ;PRINT-MEMORY-CONTENTS-_
;END-OF-MEMORY, EXIT
                                                                                                          GALL
                                                                                                                            PRDATA
                                                                                                                            PRCDX-
                                    103417
          277
                                                                                                                                                                                 :ADVANCE ADDRESS
:HAS UPPER MEMORY LIMIT BEEN REACHED
:NO. CONTINUE
:LOOP ON
         278
279
                                                     000000G 000000G 000000G
                 001152
                                    066767
                                                                                                           ADD
                                                                                                                            INCVAL,MSTR2
                 001160
                                    826767
                                                                                                                            MSTR2,MEND
                                                                                                           CMP
                  001166
                                    101674
                                                                                                           BLOS
                                                                                                                            PRCD
         281
                 001170
                                    032767
                                                     000000G - 000000G
                                                                                                                            #LOOP,BASE
                                                                                                                                                                                 NO PARTY OF THE PA
                                   901404
016767
         282 - 001176
                                                                                                          BEQ.
                                                                                                                            PRCDX:
         283 001200
                                                     000000G-000000G
                                                                                                                            MSTRT, MSTR2.
                                                                                                                                                                                 :INIT START ADDRES
                                                                                                          MOV
         284 001206
                                    000664
                                                                                                                            PRCD
```

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CPPR-

286 001210 287 001212 288 001216 005046 CLR MOV: PRCDX: -(SP) #Q\$NCLK,-(SP) CSR1 ;CLEAR NOTHING:IN:CSR1 ;SET:NO-CLOCKS: 012746 176000 CALL 288 001216 289 001222 290 291 001226 292 001226 293 001234 005067 176422 CLR QR\$CR2 ;SET-LOAD-MODE-PR2X: 042767 000000C-000000G-#<ONCE+OUT>,BASE KILL BIC. ;CLEAR PRINT CONTROL FLAGS ;KILL AST CALL JMP 294 001240 000167 000000G CPXX

```
CPPR-
          MACRO-M1110 27-MAR-80 14:44 PAGE 6
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     296
297
     298
                                                               PRINT-BUFFER COMMAND
     299
     300
     301
          001244
                                                     PB2::
                                                                                                          :LOCATE NON-BLANK IN COMMAND LINE
     302.001244
                                                               CALL
                                                                          FIND
                                                                                                         OK, CONTINUE:
     303 001250
                     103004
                                                               BCC
                                                                          1 45
     304 001252
                                                                          ÉRR4
                                                               CALL
     305 001256
                     000167
     386
     307
          001262
                     012700
                               000003
                                                     15:
                                                               MOV-
                                                                          #PB2LN,R0
                                                                                                         :NUMBER OF TABLE ENTRIES :
:POINT TO TABLE :
:MATCH AGAINST COMMAND LINE :
                                                                          #PB2TBL,R2
     300
          001266
                     012702
                                                               MOV.
     309 001272
310 001276
                                                               CALL
                                                                          SCAN
                     103004
                                                               BCC.
                                                                          2$
                                                                                                          :MATCH-WAS MADE
     311 001300
312-001304
                                                               CALL
                                                                          ERR7
                                                                                                          ; "INVALID · MEMORY · MNEMONIC :
                     000167
                               000244
                                                               JMP
                                                                          PB2X
     313
314 001310
                     000171
                               000000
                                                     2$:
                                                               .IMP
                                                                          @(R1)
                                                                                                          ; JUMP · TO · ROUTINE
     316
317
318
319
                                                               PRINT.HIT.BUFFER.
          001314
     320
                                                     PB2HB::
                                                                                                          :HOW-TO-STOP-PRINT:
:R3 -> HIT LIST-BUFFER:
:NUMBER-OF WORDS-IN-BUFFER:
          001314
     321
                                                               CALL
                                                                          HANG
#HLB,R3
          001320
                     012703
                               000000G
                                                               MOV-
                     012700
012705
012702
     323
          001324
001330
                                000200
                                                               MOV
                                                                                                         324
                               000000G
                                                                          #PRINT, R5
                                                     1$:
                                                               MOV
     325
          001334
                                                               MOV
                                000014
                                                                          #12.,R2
      326
          001340
                     012301
                                                               MOV
                                                                           (R3) + .R1
     327 001342
328 001346
                                                               CALL
                                                                          UNPK
                     005300
                                                               DEC
                                                                          RØ
                                                                                                         ;YES, EXIT
;FINISHED.WITH.CURRENT.PRINT.LINE.?.
;YES, WRITE.TO.CONSOLE.
;BUMP.PRINT.LINE.POINTER.
          001350
                     001413
                                                               BEO
                                                                          4$
      330
          001352
                     005302
                                                               DEC
                                                                          R2
     331 001354
332:001356
                     001402
                                                               BEQ
                                                                          3$
                     005205
                                                               INC
                                                                          R5
     333
334
          001360
                     000767
                                                                          2$
                                                                                                          ;GET-NEXT-WORD-
          001362
001366
     335
                                                               CALL
                                                                          CONSOL
                                                                                                          :WRITE TO TERMINAL
      336
                     032767
                                000000G · 000000G
                                                               BIT.
                                                                          #LOOP, BASE
                                                                                                          :CONTINUE - WRITING -
                                                                                                         ;NO, EXIT:
:INITIALIZE:NEXT:PRINT:LINE
;WRITE:TO:TERMINAL:
           001374
                     001467
                                                               BEQ.
                                                                          PB2X
      338 001376
                     000754
                                                               BR
      339
          001400
                                                     4$:
                                                                CALL
                                                                          CONSOL
                     000463
      340
          001404
                                                                          PB2X
      342
     343
344
                                                               PRINT-OUT-HRL-BUFFER-
      345
      346
          001406
                                                     PB2HL::
                                                                                                          :HOW TO STOP PRINT
:R3 -> HRL BUFFER
:NUMBER OF LIORDS IN BUFFE
:NUMBER OF LIORDS IN BUFFE
      347
          001406
                                                               CALL
                                                                          HANG
          001412
                     012703
     348
                               ийийийи.
                                                               MOV.
                                                                          #HRL.R3
                                                                          #128..R0
#PRINT,R5
     349
          001416
                     012700
                                000200
                                                               MOV.
                                                                                                                                           THE STATE OF THE STATE OF
     350 001422·
351 001426
                    012705
012702
                               000000G
                                                     1$:
                                                               MOV.
                                                                                                          :NUMBER OF WORDS PER PRINT LINE :LOAD WORD TO PRINT INTO RI
                                                                          #12..R2
(R3)+.R1
                               000014
                                                               MOV
     352.001432
                    012301
                                                               MOV
```

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```
MACRO M1110 27-MAR-80 14:44 PAGE 6-2
FABLE Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
CPPR-
SYMBOL TABLE
ALUCKE = · 040000
                                 BYTE38= 000046
                                                                  BYTE9 = 000011
                                                                                                  LOC:EN= 000100
                                                                                                                                   Q$CHRL=:000200
ALU0E - 004000
                                 BYTE39= 000047
                                                                  BYTE90 = 000132
                                                                                                  LOC:WA= 040000
LOC:WB= 100000
                                                                                                                                  Q$CLR·=·000040
Q$CNC·=·030000
Q$CP =·000060
       = 010000
A01
                                 BYTE4 = 000004
                                                                  BYTE91= 000133
BASE - = - ********* 6.4
                                 ВҮТЕ40= : папа5а
                                                                                                  LOOP
                                                                  BYTE92= 000134
                                                                                                         = · жжжжжжж GX ·
        =·***** GX
                                 BYTE41= 000051
                                                                                                                                   Q$CPCC= 000010-
Q$CP2 = 000260::
Q$CSC = 010000
                                                                  BYTE93 = 000135
                                                                                                  MAREN1 = . 000001
BINUD := : ****** GX
                                 BYTE42= 000052
                                                                  BYTE94= 000136
                                                                                                  MAREH2=:004000
BITVAL = . 000000
                                 BYTE43= 0000053
                                                                  BYTE95 = 000137
                                                                                                  MARLOD = : 010000
BIT0 = 000001
                                 BYTE44= 000054
                                                                  BYTE96= 000140
                                                                                                  MAROUT= 000002
                                                                                                                                   0$CSEL = - 000360
BITI
         = 0000002
                                 BYTE45= 000055
                                                                  BYTE97= 000141
                                                                                                  MAR.LO= 002000
                                                                                                                                   Q$CSET= 0000002
BITIØ
        = .002000
                                 BYTE46= 000056
                                                                                                  MAR.OU=.000040
MBKALL=.001000
MBKCLK=.000400
MEND.=.****** GX-
                                                                  BYTE98= 000142
                                                                                                                                   Q$CSP -=
BIT11 = 004000
                                 BYTE47 = . 000057
                                                                  BYTE99= 000142
                                                                                                                                   0$DMA · = · 000001
0$ENBK = · 040000
BIT12 -- 010000
                                 BYTE48 = . 000060
                                                                  BYTVAL = . 000144
BIT13
                                                                 CBKALL = 001000
CBKCLK = 000400
CDHIGH = ******* GX
CDLOW = ******* GX
        = 020000
                                 BYTE49= 000061
BYTE5 = 000005
                                                                                                                                   0$ENOP= 020000
BIT14 = 040000
                                                                                                  MMADRD= 000100
MMLEFT= 000002
MMOE = 000004
                                                                                                                                   Q$FAL -- 004000
BIT15 = 100000
                                 BYTE50= 000062
                                                                                                                                   Q$FC
                                                                                                                                          = 000045
       = 0000004
BIT2.
                                 BYTE51= 000063
                                                                                                                                   O$EO.
                                                                                                                                          = . 000044
        = 0000010
BIT3
                                 BYTE52= 000064
                                                                  CNOBRE = 100000
                                                                                                  MMWRTE=-000010
                                                                                                                                   Q$FP
                                                                                                                                           = . 000046
        = 000020
                                 BYTE53= 000065
                                                                  CONSOL = · ******
                                                                                                                                   Q$HBF.=.000002
Q$ICP = 000006
Q$IHB = 000003
                                                                                                  MNOBRE = 100000
BIT5
        = 0000040
                                 BYTE54= 000066
                                                                  CPCCEN= 010000
                                                                                                  MREN1 = 0000001
MREN2 = 020000
        = .000100
BIT6
                                 BYTE55= 000067
                                                                  CPCR · = · *****
BIT7
         = 000200
                                BYTE56=-000070
BYTE57=-000071
                                                                  CPLB -
                                                                        =·***** GX
                                                                                                  MRPCR - ****** GX-
                                                                                                                                   Q$IHRL= 0000002
        = 000400
                                                                  CPREAD = 040000
CPWRTE = 020000
                                                                                                  MSTRT = - ****** GX
                                                                                                                                   Q$IMRP=.000007
                                 BYTE58- 000072
BIT9
        --001000
                                                                                                  MSTR2 - - ****** GX
                                                                                                                                   Q$LBD - - 001000
BUFSET= · ****** GX
                                 BYTE59=-000073
                                                                  CPXX
                                                                          =·******* GX
                                                                                                  MSYN = 000040
                                                                                                                                   Q$LBDP= 001001
BUFS4 = ****** GX
                                 ВҮТЕ6 = пополо
                                                                  CSADRD = 000004
CSEQCI = 100000
                                                                                                           = 000144
                                                                                                                                   Q$LBP - - 000001
BYTE0 = 000000
BYTE1 = 000001
                                 BYTE60=-000074
                                                                                                          = · жижжжжж GX
                                                                                                  ONCE.
                                                                                                                                   Q$LDCD=-000003
                                BYTE61 = . 000075
BYTE62 = . 000076
                                                                  CSHIGH=·******** GX·
                                                                                                           жжжжжж GX
                                                                                                  DUT:
                                                                                                                                   Q$LDMD = 000004
BYTE10= 0000012
                                                                  CSLOW = ****** GX
                                                                                                  PACK-
                                                                                                                                   Q$LDPP= 002000
                                                                                                          = · ************ GX
BYTE11= 000013
                                 BYTE63 - 000077
                                                                  CSOE - 000040
CSR1 - ****** GX
                                                                                                  PB2
                                                                                                             001244RG
                                                                                                                             002.Q$LHP.=.
BYTE12= 000014
BYTE13= 000015
                                BYTE64= 000100
BYTE65= 000101
                                                                                                                             002 · Q$MNC · = · 
002 · Q$MR = ·
                                                                                                  PB2BL
                                                                                                             001500RG
                                                                                                                                              140000
                                                                                                                                  ·Q$MR = ·000052
·Q$MR = ·000052
·Q$MRP ·= ·000040
                                                                  CSWRTE=-000100
                                                                                                  РВ2НВ
                                                                                                             001314RG
BYTE14= 000016
                                 BYTE66= 000102
                                                                 DATA1 = · ******* GX
DATA2 · = · ******* GX
                                                                                                  PB2HL
                                                                                                             001406RG
                                                                                                                              002
BYTE15= 000017
                                 BYTE67= 000103
                                                                                                                             0$MRP2=-000240
002-0$MSC-=-040000
002-0$MSET=-000004
                                                                                                  PB2LN - = -
                                                                                                             000003 G
BYTE16= 000020
BYTE17= 000021
                                 BYTE68= 000104
                                                                  DATA3 = ******* GX
                                                                                                  PB2TBL PB2X
                                                                                                             000010RG
                                 BYTE69 = 000105
BYTE7 = 000007
                                                                  DATA4 = ******* GX
                                                                                                             001554R
BYTE18=-000022
                                                                  DBR.RD= 000001
                                                                                                                                   Q$MSP -- 100000
                                                                                                  PLB.
                                                                                                             000010
                                 BYTE70= 000106
BYTE19=-000023
                                                                 DB$CPP=.001457
DB$SPT=.000026
                                                                                                             000020
                                                                                                                                   Q$NCLK= 176000
BYTE2 = 000002
                                 BYTE71= 000107
                                                                                                  PLD.
                                                                                                             000030
                                                                                                                                              000100
                                                                                                                             Q$PPSW= 000320
Q$PP2 = 000300
002 Q$QHLT= 000013
BYTE20=-000024
                                 BYTE72= 000110
                                                                  DB$TPC=-000023
                                                                                                  PLRWR - = - 000200
BYTE21=-000025
BYTE22=-000026
                                 BYTE73= 000111
                                                                  DISPGS= 100000
                                                                                                  PLR.EN= 000200
                                 BYTE74=:000112
                                                                  DMAAWR = - 000005
                                                                                                  PRCD-
                                                                                                             000760R
BYTE23= 000027
                                 BYTE75= 000113
                                                                  DMARRD = - 000003
                                                                                                  PRCDX:
                                                                                                             001210R
                                                                                                                                   O#OL
                                                                                                                                             000043
BYTE24= 000030
                                 BYTE76= 000114
                                                                  DMARWR = . 000004
                                                                                                  PRDATA= ******* GX
                                                                                                                                   Q$QLA - = -
                                                                                                                                              000053
BYTE25= 000031
                                 BYTE77 = . 000115
                                                                  EFN.3 = ******
                                                                                                                                   G$QLB = 000054

P$QTR = 700001

G$QH = 7000042

G$RDCD = 000005

G$RDMD = 000006
                                                                                                  PRINT - - ****** GX
BYTE26= 000032
BYTE27= 000033
                                 BYTE78= 000116
BYTE79= 000117
BYTE8 = 000010
                                                                  ENBR
                                                                            010000
                                                                                                             000024RG
                                                                  ERR11 = ******** GX
BYTE28=-000034
                                                                         = ******* GX
                                                                  ERR4
                                                                                                  PRZCS
BYTE29= 000035
BYTE3 = 000003
                                 BYTE80= 000120
                                                                  ERR5
                                                                          = · ******* GX
                                                                                                  PR2LN = 000002 G
                                 BYTE81 = . 000121
                                                                  ERR7
                                                                                                  PR2TBL
                                                                                                                             002 · Q$REBK = · 001000
002 · O$PNC · = · 006000
                                                                                                             000000RG
BYTE30= 0000036
                                 BYTE82= . 000122
                                                                          = · ******* GX
                                                                  FIND
                                                                                                  PR2X-
                                                                                                             001226R
BYTE31= 000037
                                 BYTE83= 000123
                                                                  HANG
                                                                          = · ********** GY
                                                                                                  OR$CR1= 176420
                                                                                                                                   £$RSC - = : 004000
BYTE32= 000048
                                 BYTE84= 000124
                                                                  HLB.
                                                                          = · ************
                                                                                                  QR$CR2= - 176422
                                                                                                                                   Q$RSET= 000010
Q$SM = 100000
BYTE33= . 000041
                                                                                                   QR$LBR= 176424
                                 BYTE85 = . 000125
                                                                  HR_+ = - ********** GX
INCVAL= - ********** GX
BYTE34= 000042
                                 BYTE86= 000126
                                                                                                  Q$ATTN= 000100
Q$BCL = 000001
                                                                                                                                   0$5P. . . . 000120
0$5P2 - 000340
RGO.EN= 000200
BYTE35 = . 000043
                                 BYTE87 = . 000127
                                                                  KILL: = : ******* GX
BYTE36=-000044
BYTE37=-000045
                                BYTE88=:000130
                                                                  LBCP
                                                                                                  Q$CCCP= 000040
                                BYTE89= 000131
                                                                  BMRP
                                                                                        X. Q$CHB. = 000400
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                                                                                                                                   RGQ.VA= 020000
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The Paris Paris Charles Commenter
                0 M1110 27+MAR+80 14:44 PAGE 6-3
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SYMBOL . TA
RTNPT = ****** GX
                                 T$DISK=-000200
                                                                  WORD: - 000002
                                                                                                  WORD40=-000120
                                                                                                                                   WORD71= 000216
SCAN: = ******* GX
                                 T$DRD - = - 000004
                                                                  WORD10= 000024
WORD11= 000026
                                                                                                   WORD41= 000122
                                                                                                                                   WORD72= 000220
WQRD73= 000222
SEQCS·≔·****** GX
                                 T$EMEM= 010000
                                                                                                  WORD42=-000124
SEQMM = * ***** 6%
                                 T$F$AA=:000000
                                                                  WORD12= 000030
                                                                                                  WORD43= 000126
                                                                                                                                   WORD74= 000224
SEQ.CI=-000010
                                 T$FSAB= 000004
                                                                  WORD13=-000032
                                                                                                  WORD44= 000130
WORD45= 000132
                                                                                                                                   WORD75= 000226
S$CLR · = · 000000
                                 T$FSAC= 000014
                                                                  WORD14= 000034
WORD15= 000036
                                                                                                                                   WORD76=-000230
WORD77=-000232
S$LA - - AAAAAA
                                 T$FSB2= 000010
                                                                                                  WORD46= 000134
WORD47= 000136
S$QB - - 000005
                                 T$IB: =:000026
                                                                  WORD16= 000040
                                                                                                                                   WORD78 = 000234
S$QR
        = 000006
                                 T$IBAR = 000024
                                                                  WORD17= 0000042
                                                                                                  WORD48 = . 000140
                                                                                                                                   WORD79= 000236
WORD8 = 000020
S$0X.
        =·000004
                                 T$IBE - 020000
                                                                  WORD18= 000044
                                                                                                   WORD49= 000142
        = 000007
S$SR
                                 T$IBF - = 040000
T$ICD - = 000040
                                                                  WORD19= 000046
WORD2 - 000004
WORD20= 000050
                                                                                                  WORD5 = 000012
WORD50= 000144
                                                                                                                                   WORD80= 000240
        = 000010
= 000014
S$S1
                                                                                                                                   WORD81= 000242
WORD82= 000244
S$S2
                                 T$MODE = . 004000
                                                                                                   WORD51= 000146
TD$CTR= 176370
                                 T$0B · = · 000036
                                                                  WORD21 = . 000052
                                                                                                  WORD52=-000150
WORD53=-000152
                                                                                                                                   WORD83= 000246
TD$CTW= · 176360
                                 T$0BE - = - 004000
                                                                 WORD22=-000054
WORD23=-000056
WORD24=-000060
                                                                                                                                   WORD84= 000250
WORD85= 000252
WORD86= 000254 /
TD$INL = 004000
TD$MEM= 000270
                                 T$0BF - = - 010000
                                                                                                   WORD54= 000154...
                                 T$0BRA= 000034
                                                                                                  WORD55= 000156.= ;
WORD56= 000160_ ;
TD$0AR= 176344
                                 T$0BWA=-000032
                                                                  WORD25= 000062
                                                                                                                                   WORD87= 000256
TD$0TR= 176346
                                                                                                  WORD57= 000162
WORD58= 000164
                                 T$0UTA= 100000
                                                                  WORD26= 000064
                                                                                                                                   WORD88= 000260
WORD89='000262
WORD9 = 000022
TD$QRD= 000274
TD$SW = 176376
TD$TAR= 176372
                                 T$RBD0= 000200
                                                                  WORD27= 000066
                                                                  WORD28 = . 0000070
                                 T$RHB - - 000040
                                                                                                   WORD59-000166
                                 T$RSET= 040000
T$SC = 000022
                                                                  WORD29= 000072
                                                                                                  WORD6 = 000014
                                                                                                                                   WORD90= 000264
TD$TAW= 176362
                                                                 WORD3 = 000006
WORD30= 000074
WORD31= 000076
                                                                                                   WORD60= 000170
                                                                                                                                   WORD91= 000266
WORD92= 000270
TD$TDR= 176374
                                 T$SCLK = . 020000
                                                                                                   WORD61= 000172
TD$TDW= 176364
                                 T$SEG1 = 000000
T$SEG2 = 000001
                                                                                                  WORD62= 000174
WORD63= 000176
                                                                                                                                   WORD93= 000272
T$AD· = 000020
                                                                  WORD32= 000100
                                                                                                                                   WORD94= 000274
WORD95= 000276
T$BA · = · 000002
                                 T$SEG3= 000002
                                                                  WORD33=-000102
                                                                                                   WORD64= 000200
T$BD - 000010
                                                                  WORD34= 000104
                                         = 000001
                                                                                                                                   WORD96* 000300
WORD97* 000302
                                                                                                   WORD65=-000202
T$BSO - = - 100000
                                 T$UBUS= 100000
                                                                  WORD35 - 000106
                                                                                                  WORD66=-000204
WORD67=-000206
T$BT: =:000020
                                 T$1CLK=-000400
                                                                  WORD36 = 000110
                                                                                                                                   WORD98= 000304
T$BTAR = . 000030
                                 T$8BEN= 000020
                                                                  WORD37--000112
                                                                                                   WORD68= 000210
                                                                                                                                  #WORD99= 000306
WRDVAL= 000310
XTREAD= 001000
T$BTD - = 002000
T$CD - = 000100
                                 UBD: IN= 000020
                                                                                                  WORD69=2000212
WORD7 = 000016
                                                                  WCRD38=-000114
                                                                  WORD39= 000115
                                        = · ***** GX ·
T$CLK - = - 002000
                                 WORD0 - 000000
                                                                  WORD4 = 000010
                                                                                                  WORD70= 000214
                                                                                                                                   XTURTE = . 000400
  ABS.
           000000
                          000
           ававав
                          001
CPPP
           001564
                          002
ERRORS DETECTED:
                        Ø
VIRTUAL MEMORY-USED: 3671 WORDS- (-15 P
DYNAMIC MEMORY: 4916 WORDS- (-18 PAGES)
ELAPSED TIME: 00:00:50
                                              ( 15 PAGES)
UPPR,GPPR/-SP=[20,1]IM,[20,1]CPPR
```

```
0 M1110 27-MAR-80 14:35 PAGE<u>-</u>5
                                                            Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3
                                                                                             .FITLE . BGE.
      000000
                                                                                             .PSECT BCE
                                                                                             .LIST. MEB.
  4
                                                                                            MARDWARE-QUERY-RESOLVER-'MANUAL' DEBUGGING AIDS-BUS-CONTROL-ELEMENT-TEST-ROUTINES-
                                                                                            PARSE THE COMMAND LINE AND TRANSFER CONTROL TO ONE OF THE BCE SUB-MODULES OR BACK TO OMAIN. CONTROL COULD HAVE BEEN PASSED TO BCE IN ONE OF THREE WAYS:

1. FROM QMAIN IF BCE WAS SELECTED AS THE FIRST PROCESSOR UPON ENTRY. TO THE PROGRAM.
1 i
12
13
                                                                                                   >BC·ST·0 C1
                                                                                            2: FROM: OMAIN: IF-BCE-WAS-SELECTED-FROM: ONE OF-QMAIN:S-
OTHER-SUB-MODULES:
CP>BC-ST-Ø C1
3: ON-RETURN FROM: ONE-OF-BCE'S-SUB-MODULES
15
16
19
                                                                                                   BC>ST-0 C1
20
                                                                                           BCE-PARSES.AT-THE-SECOND-LEVEL-OF-CONTROL-(SEE-NOTES AT-QMAIN-ON-LEVELS-OF-CONTROL). IN-THE-EXAMPLES-ABOVE, BCE-WOUST-PARSE.'LD' AND-TRANSFER-CONTROL-TO-THE-BCE-SUB-MODULE-BCREST; IF-BCE-SHOULD-ENCOUNTER-A-STRING-WHICH-IS-NOT-A-VALID-COMMAND-MNEMONIC, BCE-CONSIDERS-THE-STRING-TO-BE-A-PROCESSOR-MNEMONIC-AND-RETURNS-CONTROL-TO-QMAIN. EG:BC>CP-LD-CS-0
THE-STRING-'CP' IS-NOT A-VALID-BCE-(SECOND LEVEL) COMMAND.BCE-RETURNS-CONTROL-TO-QMAIN-WHICH-IN-TURN WILL-TRANSFER-CONTROL-TO-ITS-SUB-MODULE-CP;
21
23
24
25
26
27
28
30
31
                                                                                            CONTROL TO ITS SUB-MODULE CP.
                                                                                            BCE-SUB-MODULES:
                                                                                            BCREST ALL BCE COMMANDS
34
35
36
      000000
                                                                           BCTBL:
      000000
                              123
                                               124
                                                                                                                                                :STORE · INTO · A · REG
      000002
                       000000G
                                                                                             .WORD
                                                                                                             ST3
39
      000004
                                               105
                                                                                             .ASCII
                                                                                                              ZREZ
                                                                                                                                                :READ - FROM - A - REG
40
     000006
                       000000G
                                                                                             .WORD
                                                                                                             RE3
      000010
                              122
                                               123
                                                                                              ASCII:
                                                                                                              /RS/
                                                                                                                                                :RESET-HOR-
42
      000012
                       000000G
                                                                                                             RS3
                                                                                             .WORD
43
                       000003
                                                                           BCNUM-
                                                                                                              <.-BCTBL>24
```

```
BCE- ... MACRO MIII0 27-MAR-80 14:35 PAGE 6
                                        Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
     46
47
                                                          BCE - ROUTINES
                                                                                                                                         4 5 470 mg
      48
     49
50
         000014
                                                BCE::
      51
         000014
                   004767
                             000000G
                                                                   PC.FIND
                                                                                       :LOCATE · THE · COMMAND · IN · THE · COMMAND · LINE
     52
53
54
         000020
                   103003
                                                          вос
                                                                                       ;OK, CONTINUE.
                                                                    1$
                                                                   PC, ERR3
                             000000G
                                                          JSR
         000022
                   004767
         000026
                   000422
                                                          BR
                                                                   BCEXX.
      55
         000030
                   022700
                             000002
                                                          CMP
                                                                    #2,R0
                                                                                       :COMMANDS ARE 2 CHARS
     56
57
                   001403
004767
         000034
                                                          BEQ
                                                                    2$
         000036
                                                                   PC,ERR8
                             000000G
                                                          JSR
         000042
                   000414
                                                          BR
                                                                                       :TRY-AGAIN-
                                                                   BCEXX.
      59
      60
         000044
                   012700
                             000003
                                                2$:
                                                          MOV
                                                                    #BCHUM, RØ
                                                                                       :R0 = NUMBER OF COMMANDS
         000050
      61
                   012702
004767
                             0000000
                                                          MOV:
                                                                    #BCTBL,R2
                                                                                       ;R2.-> TABLE.OF.COMMAND.MNEMONICS
      62
         000054
                             000000G
                                                          JSR
BCC
                                                                                       ;FIND MATCH IN TABLE
                                                                   PC.SCAN.
                                                                                       OK, CONTINUE:
      63
         000060
                   103003
                                                                    3$
     64
65
         000062
                   004767
                             000000G
                                                          JSR
                                                                    PC.ERR12
         000066
                   000402
                                                          BR
                                                                   BCEXX:
                                                                                       :TRY-AGAIN-
      66
      67
                                                          JUMP - TO - THE - ROUTINE - THAT - GOVERNS - THE - COMMAND
      68
      69
         000070
                   000171
                            ававава
                                                          JMP
                                                35:
                                                                    @(R1)
      70
      71
                                                          LOCAL BCE LOOP. INCLUDE PROMPT FOR BCE COMMAND.
      74
75
         000074
000074
                                                RCEXX::
                   012767
                             041502
                                                                   ##BC.GCMBLK+G.DPRM+2:;MOVE:BCE:NAME:TO:GCM;BLOCK:PC.GCONLY:;PROMPT:
PC.FIND:;LOCATE:THE:COMMAND:IN:THE:COMMAN
      76
                                      000000C
                                                          MOV
          000102
                                                                                       #PROMPT:
#LOCATE: THE: COMMAND: IN: THE: COMMAND: LINE
                   004767
                             000000G
                                                          JSR-
          000106
                   004767
                             000000G
      79
         000112
                    103003
                                                          BCC
                                                                    1$
                                                                                       OK, CONTINUE
         000114
      80
                   004767
                             000000G
                                                          JSR.
                                                                    PC.ERR3
          000120
                   000765
                                                          BP.
      81
                                                                    BCEXX.
      82
          000122
                   022700
                             000002
                                                          CMP
                                                                    #2,R0
                                                                                       :COMMANDS ARE 2 CHARS
         000126
      83
                   001403
                                                          BEQ
                                                                    2$
                                                                    PC, ERR8
      84
         000130
                   йй4767
                             000000G
                                                          JSR
      85
         000134
                   000757
                                                          BR
                                                                    BCEXX-
                                                                                       :TRY-AGAIN
      87
          000136
                   012700
                             000003
                                                          MOV-
                                                                    #BCHUM, RØ
                                                                                       :R0 = NUMBER OF COMMANDS
:R2--> TABLE OF COMMAND MNEMONICS
:FIND MATCH IN TABLE
                   012702
      88
         000142
                             0000000
                                                          MOV-
                                                                    #BCTBL,R2
      89
          000146
                             000000G
                                                                    PC.SCAN
                                                          JSR
                                                                                       OK, CONTINUE
RETURN TO 'MAIN', LOOK FOR PROCESSOR MINEMONIC
          000152
                                                          BCC
      90
                    103002
                                                                    3$
      91
          000154
                   000167
      92
      93
                                                          JUMP TO THE ROUTINE THAT GOVERNS THE COMMAND
      94
                                                          JMP
          000160
                   000171
                                                3$:
                                                                    @(R1)
      96
97
                   000001
                                                          .END
```

```
O MI110 27-MAR-80 14:35 PAGE 6-1
Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
ALUCKE = . 040000
                                 BYTE39= 000047
                                                                   BYTE90=-000132
                                                                                                                                    0$QLR·=·000001
Q$QW =·000042
                                                                                                            = 900144
ALU0E = 004000
A01 = 010000
BCE 000014F
                                                                  BYTE91= 000133
BYTE92= 000134
                                 BYTE4 = 000004
                                                                                                   PLB.
                                                                                                           = 0000010
                                 BYTE40= 000050
                                                                                                   PLC
                                                                                                            = 0000020
                                                                                                                                     Q$RDCD= 000005
           000014RG
                            002-BYTE41=-000051
                                                                   BYTE93 = . 000135
                                                                                                   PLD
                                                                                                           = .000030
                                                                                                                                     Q$RDMD=-000006
                           002 BYTE42= 000052
BYTE43= 000053
BCEXX
           000074RG
                                                                   BYTE94= 000136
                                                                                                   PLRWR - = - 000200
                                                                                                                                     Q$REBK= 001000,
BCHUM- = - 000003
                                                                   BYTE95= 000137
                                                                                                   PLR:EN=:000200
                                                                                                                                     Q$RNC -- 006000
Q$RSC -- 004000
                                                                                                   QR$CR1= 176420
QR$CR2= 176422
BCTBL ·
          000000R
                            002 · BYTE44= · 000054
                                                                  BYTE96= 000140
BITVAL = . 000000
                                 BYTE45= 000055
                                                                   BYTE97 = . 000141
                                                                                                                                     Q$RSET= 000010
BIT0 = 000001
BIT1 = 000002
                                 BYTE46 = . 000056
                                                                                                                                    Q$SM = 100000
Q$SP = 000120
Q$SP2 = 000340
RE3 = ********* GX**
                                                                  BYTE98= 000142
                                                                                                   QR$LBR= 176424
                                 BYTE47 = . 000057
                                                                   BYTE99= 000143
                                                                                                   Q$ATTN= 000100
                                 BYTE48= 000060
BYTE49= 000061
BIT10 = 002000
                                                                   BYTVAL = . 000144
                                                                                                    Q$BCL - = . 000001
BIT11 = 004000
                                                                   CBKALL = 001000
                                                                                                    Q$CCCP= 000040
                                                                                                                                     RE3 = ********
RGO.EN= 000200
BIT12 -- 010000
BIT13 -- 020000
BIT14 -- 040000
                                 BYTE5 = 000005
                                                                   CBKCLK = · 000400
                                                                                                   Q$CHB - - 000400
                                 BYTE50= 0000062
                                                                   CNOBRE = 100000
                                                                                                                                    0$CHRL= 000200
                                 BYTE51= 000063
                                                                   COMXX: =: ****** GX:
                                                                                                   Q$CLR - = - 000040
                                 BYTE52= 000064
                                                                   CPCCEN= 010000
                                                                                                    Q$CNC -- 030000
BIT2 - - 000004
                                 BYTE53= 000065
                                                                   CPREAD = 040000
                                                                                                                                     SEQ.CI=.000010:
                                                                                                    Q$CP· = 0000060
       = 0000004
BITS
                                 BYTE54= 0000066
                                                                                                                                     ST37 = ******** GX
S$CLR = 000000
                                                                   CPWRTE = - 020000
                                                                                                   Q$CPCC=-000010
        = 0000020
                                 BYTE55= 000067
BYTE56= 000070
                                                                   CSADRD= 000004
                                                                                                    Q$CP2.=.000260
Q$CSC.=.010000
        = . 000040
                                                                                                                                     S$LA
                                                                                                                                           ° ≓ 000001
                                                                   CSEQCI = 100000
        = 000100
= 000200
                                                                  CSOE - - 0000040
CSWRTE - 000100
BITS
                                 BYTE57= 000071
                                                                                                    Q$CSEL = 000360
Q$CSET = 000002
                                                                                                                                     S#QB
                                                                                                                                            =/000005
                                 BYTE58=-000072
BYTE59=-000073
BYTE6 =-000006
BIT7
                                                                                                                                           = 000006
                                                                                                                                     SSOR
        = 000400
                                                                  DBR.RD= 000001
DB$CPP= 001457
                                                                                                    Q$CSP -= -020000
                                                                                                                                            = 0000004
BIT9 = 001000
BYTE0 = 000000
                                                                                                                                     S$0X
                                                                                                                                            - 000007
                                                                                                    Q$DMA - = - 0000001.
                                                                                                                                     S$SR
                                 BYTE60 - 000074
                                                                   DB$SPT= 000026
                                                                                                    Q$ENBK= 040000
                                                                                                                                            = · 000010
= · 000014
                                                                                                                                     S$S1
BYTE1 = 000001
                                 BYTE61= 0000075
                                                                   DB$TPC=-000023
                                                                                                    Q$ENOP = . 020000
                                                                                                                                     9$92
BYTE10= 000012
                                 BYTE62= 0000076
                                                                  DISPGS= 100000
DMAAWR= 000005
                                                                                                    Q$FAL - = . 004000
                                                                                                                                     TD$CTR=:176370
BYTE11= 000013
                                 BYTE63= 000077
                                                                                                   Q$FC - 000045
Q$FO - 000044
                                                                                                                                     TD$CTW- 176360
BYTE12= 000014
                                 BYTE64= 000100
BYTE65= 000101
                                                                   DMARRD= . 000003
                                                                                                                                     TD$INL = 004000
TD$MEM = 000270
BYTE13= 000015
                                                                  DMARWR= 000004
ENBR = 010000
                                                                                                    Q$FP = 000046
BYTE14= 000016
                                 BYTE66= 000102
                                                                                                                                     TD$0AR = 176344
TD$0TR = 176346
                                                                                                    Q$HBF -- 000002
Q$ICP -- 000006
BYTE15= 000017
                                 BYTE67 = . 000103
                                                                   ERR12 - - жижжиж GX
                                                                                                                                     TD$UTR= 176346
TD$QRD= 000274
TD$SW: 176376
TD$TARF 176372
TD$TAW= 176362
BYTE16= 000020
                                 BYTE68= 000104
                                                                   ERR3
                                                                         = - жиминиж GX
                                                                                                    Q$IHB - = 000003
BYTE17= 000021
                                 BYTE69= 000105
BYTE7 = 000007
                                                                  ERR8
                                                                          = · ******* GX
                                                                                                    Q$IHRL= 000002
BYTE18= 000022
                                                                          = ******* GX
                                                                  FIND:
                                                                                                    Q$IMRP=.000002
Q$LBD.=.001000
                                 BYTE70= 000106
BYTE19= 0000023
                                                                   GCMBLK = · ****** GX
BYTE2 - - 000002
                                 BYTE71= 000107
BYTE72= 000110
                                                                   GCONLY= · ****** GX
                                                                                                    Q$LBDP= 001001
                                                                                                                                     #TD$TDR = 176374
BYTE20= 0000024
                                                                   G.DPRM= ******* GX
                                                                                                    Q$LBP - = . 000007
                                                                                                                                     TD$TDW= 176364
BYTE21= 000025
                                 BYTE73= 000111
                                                                  LOC.EN= 000100
LOC.WA= 040000
LOC.WB= 100000
                                                                                                   Q$LDCD=.000003
Q$LDMD=.000004
                                                                                                                                     T$AD = 000020
T$BA = 000002
T$BD = 000010
T$BSO = 100000
                                 BYTE74= 000112
BYTE75= 000113
BYTE76= 000114
BYTE22= nnnn26
BYTE23 = . 000027
                                                                                                    Q$LDPP= 002000
BYTE24= : 000030
                                                                                                    Q$LHP·=·010000
Q$MNC·=·140000
Q$MR· =·000052
                                                                  MAREN1 = 0000001
BYTE25= 000031
                                 BYTE77= 000115
                                                                  MAREN2 = 004000
                                                                                                                                     T$BT = 000020
                                 BYTE78=-000116
BYTE79=-000117
BYTE8 =-000010
BYTE26= 000032
                                                                   MARLOD = 010000
                                                                                                                                     T$BTAR=:000030
BYTE27 = · 000033
                                                                  MAROUT= . 000002
                                                                                                    Q$MRP - = - 000040
                                                                                                                                     T$BTD = 002000
T$CD = 000100.
T$CLK = 002000
BYTE28= 0000034
                                                                  MAR.LO= 002000
                                                                                                    Q$MRP2= 000240
BYTE29=-000035
                                 BYTE80= 000120
                                                                  MAR:0U= 000040
                                                                                                    Q$MSC - = - 040000
BYTE3 = 000003
                                 BYTE81= 000121
                                                                   MBKALL = . 001000
                                                                                                    Q$MSET= .000004
Q$MSP . = . 100000
                                                                                                                                     T$DISK = 002000
T$DISK = 000200
T$DRD = 000004
T$EMEM= 010000
T$FSAA = 000000
BYTE30 = . 000036
                                 BYTE82=-000122
                                                                   MBKCLK = . 000400
BYTE31=-000037
                                 BYTE83=:000123
                                                                  MMADRD= 000100
MMLEFT= 000002
MMOE = 000004
                                                                                                    Q$NCLK 176000
Q$PP 000100
BYTE32= 000040
                                 BYTE84= 000124
                                                                                                    Q$PPSW= 000320
Q$PPS = 000320
BYTE33= . 000041
                                 BYTE85 - 000125
                                                                                                                                     T$FSAB= 000004
T$FSAC= 000014
BYTE34= 0000042
                                 BYTE86= 999126
                                                                  MMWRTE= 000010
                                 BYTE87=-000127
BYTE35= 0000043
                                                                                                                                     T$FSB2=-000010
T$IB =-000026
                                                                  MNOBRE = 100000
                                                                                                    Q$QHLT= 000013
BYTE36= 000044
                                 BYTE88= 000130
                                                                  MFEN1 = 000001
                                                                                                    0$0L -
                                                                                                           = 000043
BYTE37= 000045
                                 BYTE89=:000131
                                                                  MREN2 - - 020000
                                                                                                    Q$QLA -- 000053
                                                                                                                                     T$IBAR = 000024
BYTE38= 000046
                                         = 0000011
                                 BYTE9
                                             000011 MSYN = 000040
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                                                                                                                                     T$IBE - 020000
```

```
BCE----MACRO-Mill0 27+MAR-80 14:35
                                         SYMBOL TABLE
T$18F-=-040000
                              WORD11=-000026
WORD12=-000030
                                                            WORD34=-000104
                                                                                                                        WORD8 = 000020
T$ICD -- 000040
                                                            WORD35= 000106
                                                                                          WORD58= 000164
                                                                                                                        WORD80= 000240
T$MODE = . 004000
                              WORD13= 000032
                                                            WORD36= 000110
                                                                                          WORD59= 000166
                                                                                                                        WORD81= 000242
T$08 - - 000036
T$08E - - 004000
                                                                                          WORD6 = 000014
                              WORD14= 000034
                                                            WORD37=-000112
                                                                                                                        WORD82=-000244
                              WORD15= 000036
                                                            WORD38= 000114
                                                                                          WORD60= 000170
                                                                                                                        WORD83=-000246
T$0BF ·= ·010000
                              WORD16= 000040
                                                            WORD39=-000116
                                                                                          WORD61=-000172
                                                                                                                        WORD84= 000250
                                                            WORD4 = 000010
T$0BRA= 000034
                              WORD17= 0000042
                                                                                          WORD62= 000174
WORD63= 000176
                                                                                                                        WORD85= 000252
T$0BWA= 000032
                              WORD18= 000044
                                                            WORD40= 000120
                                                                                                                        WORD86= 000254
T$0UTA= 100000
                              WORD19= 0000046
                                                            WGRD41= 000122
                                                                                          WORD64= MAM2MA
                                                                                                                        WORD87 = 000256
T$RBD0=-000200
                              WORD2 - = - 000004
                                                            WORD42= 000124
                                                                                          WORD65= 000202
                                                                                                                       WORD88= 000260
WORD89= 000262
T$RBDU= 000200
T$RNB = 000040
T$RSET= 040000
T$SC = 000022
T$SCLK= 020000
                              WORD20= 0000050
                                                            WORD43= 000126
WORD44= 000130
                                                                                          WORD66= 000204
                              WORD21-000052
                                                                                          WORD67= 000206
                                                                                                                        WORD9 = 0000022
                                                                                         WORD67= 000210

WORD68= 000212

WORD69= 000212

WORD7 = 000214

WORD70= 000214

WORD71= 000216
                              WORD22 = 000054
WORD23 = 000056
                                                            WORD45= 000132
                                                                                                                        WORD90= 000264
                                                            WORD46=-000134
WORD47=-000136
                                                                                                                        WORD91=-000266
T$SEG1=-000000
                              WORD24= 000060
                                                                                                                        WORD92= 000270
T$SEG2 = . 0000001
                              WORD25=-000062
                                                            WORD48 = . 000140
                                                                                                                        WORD93=-000272
T$SEG3= 0000002
                              WORD26= · 000064
                                                            WORD49 = 000142
                                                                                                                        WORD94= 000274
T$SO - - 000001
                              WORD27=-000066
                                                            WCRD5 = 000012
                                                                                          WORD72= 000220
                                                                                                                        WORD95= 000276
T$UBUS=-100000
T$1CLK=-000400
                              WORD28= 000070
                                                            WORD50= 0000144
                                                                                          WORD73= 000222
WORD74= 000224
                                                                                                                        WORD96= 000300
                              WORD29- 000072
WORD3 - 000006
                                                            WORD51 - 000146
                                                                                                                        WORD97=-000302
T$8BEN= · 000020
                                                            WORD52= 000150
                                                                                          WORD75 - 000226
                                                                                                                        WORD98 = . 000304
UBD.IN--000020
                              ŴORD30= 000074
                                                            WORD53 = . 000150
                                                                                          WORD76= 000230
WORD77= 000232
                                                                                                                        WORD99= 000306
WORD0 = 000000
WORD1 = 000002
                              WORD31=-000076
WORD32=-000100
WORD33=-000102-
                                                            WORD54= 000154
                                                                                                                       WRDVAL = . 000310
XTREAD = . 001000
                                                            WORD55= 000156
                                                                                          WORD78= · 000234
WORD10= 000024
                                                            WORD56 = . 000160
                                                                                          WORD79=-000236
                                                                                                                        XTWRTE= 000400
         000000
. ABS.
                       คคค
          000000
                        001
                                                                                                                        erattia tan
BCF -
          000164
                       002
                                                                                                                        1. 2 -
ERRORS DETECTED:
                     Ø
VIRTUAL MEMORY USED: 3103 WORDS: (+13 PAGES)
DYNAMIC MEMORY: 3860 WORDS: (14 PAGES)
ELAPSED TIME: 00:00:42
BCE,BCE/-SP=[20,1]IM,[20,1]BCE
```

```
BCREST- MACRO.Mil10 27-MAR-80 14:35 PAGE.5
                                            Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
                                                                  .FITLE -- BCREST -- -- .PSECT - BCREST -
        2·000000
3
                                                                  .LIST MEB
        5
                                                                 HARDWARE QUERY RESOLVER 'MANUAL' DEBUGGING AIDS BUS CONTROL ELEMENT TEST ROUTINES
                                                                 COMMANDS:
      10
11
                                                                            STORE INTO A REGISTER
READ A REGISTER
                                                                 RS
                                                                            MASTER - HOR - RESET
      13
14
       15
                                                                 TABLE: OF VALID REGISTER MNEMONICS AND ASSOCIATED ROUTINE ADDRESSES
       18
       19
          000000
                                                      ST3TBL::
      20
          000000
                                    061
                                                                  .ASCII-
                                                                             ZC1Z
                                                                                                  CONTROL AND STATUS REGT
      21
22
          000002
                     0001501
                                                                            ST301
/02/
                                                                  .WORD
          000004
                         193
                                    062
                                                                                                  ;CONTROL AND STATUS REG #2
      23
24
25
27
28
29
30
31
          000006
                     000160
                                                                            ST302
                                                                  .WORD
          000010
                         114
                                                                  .ASCII.
                                                                            /LB/
ST3LB
                                                                                                  :LOD-BUS REG
                     000170
          000012
                                                                  .WORD
                     000003
                                                      ST3LN.
                                                                             <.-ST3TBL>/4
                                                                 READ.
                                                                 TABLE OF VALID REGISTER MNEMONICS AND ASSOCIATED ROUTINE
                                                                 ADDRESSES:
      32
33
34
          000014
                                                      RE3TBL::
          000014
                          103
                                    061
                                                                  .ASCII-
                                                                             2012
                                                                                                  ;CONTROL AND STATUS REG #1
                     000310°
                                                                  .WORD
                                                                            RE3C1
      35
          000020
                                    062
                                                                  .ASCII
                                                                             /C2/
                                                                                                  :CONTROL AND STATUS REG #2
      36
37
38
39
40
41
42
43
44
          000022
                     000316
                                                                  .WORD
                                                                            RE302
          000024
                     114
000324
                                     102
                                                                 .ASCII
                                                                            ZLBZ
                                                                                                  ;LOD-BUS REG
          000026
                                                                            RE3LB
                                                                  .WORD
                      000003
                                                      RE3LH
                                                                             <.-RE3TBL>/4
                                                                 STORE:
PERFORM:THIRD:LEVEL:PARSING
EG. IN:THE:COMMAND:
BC>ST:0 C1
PARSE:THE:707
      45
46
47
48
      49
          000030
                                                      ST3::
                                                                                                  FIND A NON-BLANK IN COMMAND LINE
OK CONTINUE
NOTHING THERE
RETURN TO TOP OF LOOP (PROMPT)
CONVERT VALUE IN COMMAND THE TO BE THE
          000030
                     004767
                                000000G
                                                                 JSR
BCC
                                                                            PC.FIND
      51
52
          000034
                      103004
                                                                            1.5
                                000000G
000146
000000G
          000036
                     004767
000167
                                                                 JSR
                                                                            PC.ERR4
      53
          000042
                                                                 JMP
                                                                            ST3X
      54
55
56
57
          000046
                     004767
                                                                 JSR
BCC
                                                      1$:
                                                                            PC*PACK
         000052
                     103004
                                                                            2$
          000054
000060
                     004767
000167
                                000000G
                                                                 JSR
                                                                            PC, ERR5
```

JMP

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000130

```
O M1110 27-MAR-80 14:35 PAGE 5-1
                                   Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
  58
  59
                                                     CONTINUE PARSING
  60
                                                     FIND.THE.REGISTER.MNEMONIC.IN.THE.COMMAND.LINE
  61
     000064
               004767
                        000000G
                                            2$:
                                                      JSR
                                                               PC.FIND.
                                                                                   :LOCATE · A · NON-BLANK
  63
     000070
               103004
                                                      BCC
                                                               3$
                        000000G
  64
     000072
               004767
                                                      JSR
                                                               PC.ERR4
  65
     000076
               000167
                        000112
                                                      JHP
                                                               ST3X
  66
  67
                                                      MATCH: THE: MNEMONIC: FROM: THE: COMMAND: LINE: AGAINST: THE
  68
                                                      TBALE OF VALID MNEMONICS.
 69
77
77
77
77
77
77
78
90
     000102
               312700
                                                                                   :NUMBER:OF:TABLE:ENTRIES:
:R2:-> TABLE:
:MATCH:AGAINST:COMMAND:LINE
                                                                #ST3LN,R0
     000106
               012702
004767
                        000000
                                                     MOV-
                                                                #ST3TBL,R2
     000112
                         BARRARG
                                                      JSR
                                                               PC, SCAN
     000116
               103004
                                                      BCC.
                                                                4$
                                                                                   ;OK, CONTINUE
     000120
               004767
                         000000G
                                                      JSR
                                                               PC.ERR6
     000124
               000167
                        000064
                                                               ST3X
                                                     SAVE THE POINTER TO THE ROUTINE ASSOCIATED WITH THE
                                                     REGISTER, R1 -> ROUTINE ADDRESS.
CALL ROUTINE TO SCAN COMMAND LINE FOR LOOP INDICATOR.
                                                     EG. BC>ST-0 C1 L-
LOOP-FLAG-WILL-BE-SET-IF-INDICATOR-IS-PRESENT;
JUMP-TO-ROUTINE-TO-LOAD-REGISTER.
  81
 82
83
               010167
                        000000G
                                            4$:
                                                     MOV
                                                               R1.RTHPT
                                                                                   :SAVE - POINTER - TO - RTN
  85
     000134
               004767
                        000000G
                                                      JSR.
                                                               PC.LOOPR
RTNPT.R1
                                                                                   :L00P?
  86
                                                                                   :POINT. TO ROUTINE
     888148
               016701
                        000000G
                                                     MOV
  87
     000144
               000171
                        000000
                                                      JMP
                                                               @(R1)
                                                                                   ; EXECUTE ROUTINE.
  89
  90
                                                     CONTROL AND STATUS REG #1
  92
     000150
                                            ST3G1::
  93
     000150
               016767
                        000000G-176420
                                                     MO v -
                                                               BINUD.ORSOR1
                                                                                   ;MOVE-USER-WORD-TO CSR
  94
     000156
               000410
                                                     BR
                                                               ST3LP
                                                                                   :TEST-FOR-REPEAT
  96
                                                     CONTROL AND STATUS REG #2
  97
  98
     000160
               016767
                        000000G-176422-
                                            ST3C2::
                                                               BINWD,QR$CR2
                                                                                   :MOVE · USER · LIORÎ
                                                                                                      T0_CSR · #2
     000166
               000404
                                                                                   : TEST- FOR
100
101
                                                     LOD-BUS-REG-
 102
 103
     000170
             016767
                        000000G-176424
                                            ST3LB:: MOV
                                                               BINWD,QR$LBR
                                                                                   ; MOVE · USER · WORD · TO LOD · BUS · REG
 104
     000176
               000400
                                                     BR
                                                               STALP.
                                                                                   :TEST-FOR-REPEAT
105
106
 107
     000200
                                            ST3LP:
 108
     000200
                        000000G-000000G
                                                     BIT
                                                               #LOOP,BASE
                                                                                   :REPEAT ?
 189
     000206
               001402
                                                               ST3X
                                                                                   : NO
110
     000210
               000167
                        177724
                                                     JMP
                                                               ST3IN
                                                                                   :AND REPEAT
111
112-000214
113-000214
113-000214
              884767
                        000000G
                                                     ISP
                                                                                   :KILL-AST
                                                               PC.KILL
              000167
                        000000G
                                                     JMP
                                                               BOEXX
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BCREST-

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BCREST- MACRO-M1110 27-MAR-80 14:35 PAGE-6
                                           Approved For Release 2005/07/12 : CIA-RDP85-0
     116
     117
     118
                                                              READ
     119
                                                              PERFORM. THIRD. LEVEL . PARSING
                                                              EG. IN-THE-COMMAND:
BC>RE-C1
PARSE-THE-1C11
     121
122
123
     125
126
127
         000224
                                                    RE3::
          000224
                     304767
                               000000G
                                                              JSR
                                                                                              #FIND-A-REG-MNEMONIC-IN-COMMAND-LINE
#OK, CONTINUE-
#NOTHING THERE-
#RETURN-TO-TOP-OF-LOOP-(PROMPT)
                                                                         PC.FIND.
          000230
                     103004
                                                              BCC
         000232
     128
                     004767
                               000000G
                                                              JSR -
                                                                         PC, ERR4
     129
          000236
                    000167
                               000136
                                                              JMP
                                                                         RE3X
     130
     131
                                                              MATCH THE REGISTER MNEMONIC FROM THE COMMAND LINE AGAINST
     132
                                                              THE TABLE OF VALID ADDRESSES.
     133
          000242
                    012700
     134
                                                                                              :NUMBER:OF:TABLE ENTRIES
:R2:-> TABLE:
                               000003
                                                    1$:
                                                                         #RE3LN,R0
          000246
                    012702
                               0000141
                                                              MOV.
                                                                         #RE3TBL,R2
          000252
     136
                     004767
                               000000G
                                                              JSR
                                                                         PC.SCAN.
                                                                                              ; MATCH - AGAINST - COMMAND - LINE
     137
          000256
                     103004
                                                              BCC.
                                                                         2$
                                                                                              :OK, CONTINUE
     138
                               000000G
          000260
                    004767
                                                              JSR
                                                                         PC, ERR6
          000264
                    000167
                               000110
                                                              JMP
     140
                                                              SAVE THE POINTER TO THE ROUTINE ASSOCIATED WITH THE REGISTER, R1 -> ROUTINE ADDRESS. CALL ROUTINE TO SCAN COMMAND LINE FOR LOOP INDICATOR.
     141
     142
     143
     144
                                                              EG. BCRE-C1 L
LOOP-FLAG-WILL-BE-SET-IF THADICATOR IS PRESENT
JUMP-TO-ROUTINE-TO-LOAD-REGISTER.
     145
     146
     147
      148
          000270
                    010167
                               000000G
                                                    2s:
                                                              MOV
                                                                         R1.RTHPT
                                                                                              :SAVE - POINTER - TO - RTN
     149
          000274
                    004767
                               000000G
                                                              JSR
                                                                        PC,LOOPR
RTNPT,R1
                                                                                              :LOOP?
:POINT.TO.ROUTINE
:EXECUTE ROUTINE.
     150
          000300
                    016701
000171
                               000000G
                                                    RE31H:
                                                              MOV
          000304
                               000000
                                                              JMP
                                                                         @(R1)
     152
     153
     154
                                                              CONTROL : AND : STATUS : REG #1
     155
      156
          000310
                                                    ŔE3C1::
     157
          000310
                    016701
                                                                                              :GET-CSR #1:AND-PRINT-
                                                                         QR$CR1.R1
     158
          000314
                    000406
                                                                         RE3PUT
     160
                                                              CONTROL AND STATUS REG #2
     161
     162.000316
                                                                                            ---
                                                    RE3G2::
     163
          000316
                    016701
                               176422
                                                              MOV
                                                                         QR$CR2,R1
                                                                                              :GET CSR #2
          000322
                    000403
                                                              BR
                                                                         RE3PUT
                                                                                              : AND PRINT
     165
     166
167
                                                              LOD · BUS · REG
     168 000324
                                                    RE3LB::
                                                                                             GET LOD BUS REG
     169
         000324
                    016701
                               176424
                                                              MOV
                                                                         QR$LBR,R1
     170 000330
                    000400
                                                                         RE3PUT
     171
172
```

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BCREST- M PO Mil10 27-MAR-80 14:35 PAGE_6-1 Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3 173 000332 :PRINTED ONCE:?:
:YES, SKIP::
:SET.ELAG.FOR:PRINTED ONCE:
:POINT TO PRINT LINE:
:CONVERT: VALUE: IN AL FOR:PRINTING:
:PRINT:ON:CONSOLE: 000332 032767 000000G-000000G BIT. #ONCE,BASE 175 000340 001011 BNF #ONCE, BASE #PRINT, R5 176 177 000342 052767 000000G · 000000G BIS 000350 012705 000000G MOV-178 000354 004767 000000G JSR PC JUNPK 179 000360 004767 000000G JSR. PC, CONSOL 180 000364 181 832767 000000G-000000G-1\$: BIT #LOOP,BASE :REPEAT ? 000372 001402 BEQ. RE3X :N0 183 184 000374 000167 177700 JMP RE31N : AND - REPEAT 185 000400 RE3X: 000400 942767 000406 004767 000412 000167 186 000400 187 000406 000000G · 000000G BIC #ONCE, BASE :CLEAR PRINT CONTROL FLAG 000000G JSR PC,KILL :KILL AST 188 000000G BCEXX. 189 190 191 RESET-HQR 192 193 194 000416 RS3:: 195 000416 000420 005046 012746 CLR :CLEAR · NO · BITS · IN · CSR1 -(SP)SCLEAR NO BITS IN C SET RESET CHANGE CSR1 CLEAR RESET DON'T SET ANYTHING 000010 MOV #Q\$RSET,-(SP) FW. 197 000424 004767 000000G JSR PC.CSR1 198 000430 012746 000010 MOV-#Q\$RSET,-(SP) 000434 FW. 199 005046 CLR. -(SP)FIJ 200 000436 004767 000000G JSR PC.CSR1 : CHANGE CSR1 FΨ 201 000442 202 000167 000000G JMP. 203 000001 .END

A. TAR D. W. W. W.

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BCREST MACRO M1110 27-MAR-80 14:35 PAGE 6-2
SYMBOL TABLE
                                              Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
ALUCKE = . 040000
                                                                   BYTE91=-000133
                                  BYTE4 = 0000004
                                                                                                             = .000144
                                                                                                                                      Q$QL
                                                                                                                                              = ∙ ññññ43
ALU0E -- 004000
                                  BYTE40= 000050
                                                                   BYTE92= 000134
                                                                                                     ONCE: =: ****** GX:
                                                                                                                                      Q$QLA.=.000053
A01 = 010000
BASE = ********** GX**
                                 BYTE41= 000051
                                                                   BYTE93 = . 000135
                                                                                                     PACK -
                                                                                                             =·**** GX:
                                                                                                                                      0$0LB = #00005,4#
                                 BYTE42=:000052
                                                                   BYTE94= 000136
                                                                                                     PLB.
                                                                                                             = 0000010
                                                                                                                              ·, <del>-,</del>
                                                                                                                                      Q$QLR = 000001
Q$QW = 000042
BCEXX: = · ****** GX:
                                 BYTE43= 000053
                                                                   BYTE95 = - 000137
                                                                                                             = 0000020
BYTE44= 000054
                                                                                                     PLD· = 000020
PLRWR·= 000200
                                                                   BYTE96 = . 000140
                                                                                                                                      0$RDCD= 000005
BITVAL = 000000
BIT0 = 000001
BIT1 = 000002
                                 BYTE45= 000055
BYTE46= 000056
                                                                   BYTE97= 000141
                                                                                                                                      Q$RDMD= 000006
                                                                   BYTE98= 000142
BYTE99= 000143
                                                                                                     PLR.EN= 000200
                                                                                                                                      Q$REBK=.001000
Q$RNC.=.006000
                                  BYTE47= 000057
                                                                                                     PRINT = ****** GX**
QR$CR1= 176420
QR$CR2= 176422
                                 BYTE48= 000060
BYTE49= 000061
BYTE5 = 000005
BIT10 = 002000
BIT11 = 004000
                                                                   BYTVAL = . 000144
                                                                                                                                      0$RSC -=
                                                                   CBKALL = 001000
CBKCLK = 000400
                                                                                                                                      Q$RSET= 000010
BIT12 -- 010000
BIT13 -- 020000
BIT14 -- 040000
                                                                                                     OR$LBR= 176424
                                                                                                                                      Q$SM =
                                                                                                                                                  100000
                                  BYTE50= 0000062
                                                                   CNOBRE = 100000
                                                                                                    Q$ATTN= 000100
Q$BCL = 000001
Q$CCCP= 000040
                                                                                                                                      Q$SP
                                                                                                                                      Q$SP2 = 000340
RE3 000224
                                  BYTE51= 000063
                                                                   CONSOL= ****** GX
BIT15 = 100000
                                  BYTE52= 000064
                                                                   CPCCEN= 010000
CPREAD= 040000
                                                                                                                                                 000224RG
                                                                                                                                                                  002.
BIT2:
        =·000004
                                  BYTE53 = 000065
                                                                                                     Q$CHB - = - 000400
Q$CHRL = - 000200
                                                                                                                                      RE3C1
                                                                                                                                                  000310RG
                                                                                                                                                                  002
        = 000010
BIT3
                                 BYTE54= 000066
BYTE55= 000067
                                                                   CPWRTE = . 020000
                                                                                                                                      RE3C2
                                                                                                                                                  000316RG
                                                                                                                                                                  002
        = 000020
                                                                   CSADRD = . 000004
CSEQCI = . 100000
BIT4
                                                                                                     Q$CLR - = - 000040
                                                                                                                                      RE3IN
                                                                                                                                                 000300R
                                                                                                                                                                  882
BIT5
        =·000040
                                  BYTE56= 0000070
                                                                                                    Q$CNC = 030000
Q$CP = 000060
                                                                                                                                      RE3LB -
                                                                                                                                                 1000324RG
                                                                                                                                                                  002
                                                                   CSOE - - 000040
CSR1 - ******** GX-
BITE
        = 000100
                                  BYTE57= 000071
                                                                                                                                      RE3LN = 000003 G
        = .000200
                                                                                                    Q$CPCC=-000010
Q$CP2-=-000260
Q$CSC-=-010000
BIT7
                                  BYTE58= 0000072
                                                                                                                                      RESPUT:
                                                                                                                                                 000332R
                                                                                                                                                                   002.
        = 000400
                                  BYTE59= 000073
                                                                   CSWRTE = 000100
DBR.RD = 000001
                                                                                                                                      RE3TBL
                                                                                                                                                 000014RG
                                                                                                                                                                  PP2
bIT9
        = 001000
                                         = 000006
                                  BYTE6
                                                                                                                                      RE3X
                                                                                                                                                  000400R
                                                                                                                                                                  002
BYTE0 = 000000
                                                                   DB$CPP=-0001457
DB$CPP=-00026
DB$TPC=-000023
DISPGS=-100000
                                 BYTE60= 000074
BYTE61= 000075
                                                                                                     Q$CSEL = . 000360
                                                                                                                                      RGQ.EM; 0000200
RGQ.VA¥ 020000
BYTE1 = 000001
                                                                                                     Q$CSET= 0000002
BYTE10= 0000012
BYTE11= 000013
                                  BYTE62= 000076
                                                                                                     Q$CSP·=·020000
Q$DMA·=·000001
                                                                                                                                      RS3
                                                                                                                                                 000416RG
                                                                                                                                                                  992
                                  BYTE63= 000077
                                                                                                                                      RTHPT - =
                                                                                                                                                 жжжжжж БХ
BYTE12= 000014
                                 BYTE64= 000100
BYTE65= 000101
                                                                   DMAAWR = . 000005
                                                                                                     Q$ENBK = 040000
                                                                                                                                                 жискижж БХ
                                                                                                                                      SCAN
BYTE13= 000015
                                                                   DMARRD = . 000003
                                                                                                     Q$ENOP = . 020000
                                                                                                                                      SEQ.CI= 000010
                                                                   DMARWR = 000004
ENBR = 010000
BYTE14= · 000016
                                  BYTE66= 000102
                                                                                                     Q$FAL = 004000
Q$FC = 000045
                                                                                                                                      ST3
                                                                                                                                                  000030RG
                                                                                                                                                                  002
BYTE15= 000017
                                 BYTE67 = . 000103
BYTE68 = . 000104
                                                                                                                                      ST301
                                                                                                                                                  000150RG
                                                                                                                                                                  002
BYTE16= 000020
                                                                   ERR4
                                                                                                     Q$FO
                                                                                                             = 000044
                                                                                                                                      ST302
                                                                                                                                                 000160RG
                                                                                                                                                                  002
BYTE17= 000021
                                  BYTE69= 000105
                                                                   ERR5
                                                                           = · ******* GX ·
                                                                                                     Q$FP
                                                                                                             = . 000046
                                                                                                                                      ST3IN-
                                                                                                                                                  000140P
                                                                                                                                                                  002
BYTE18= 0000022
                                  BYTE7 = 000007
                                                                   ERR6
                                                                                                    Q$HBF.=.000002.
Q$ICP.=.000006
Q$IHB.=.000003
                                                                                                                                                  000170RG
                                                                                                                                      ST3LB
                                                                                                                                                                  902
BYTE19= 000023
BYTE2 = 000002
                                  BYTE70= 000106
                                                                   FIND
                                                                           = · ****** GX
                                                                                                                                      ST3LN.
                                                                                                                                                 000003 G
                                 BYTE71= 000107
BYTE72= 000110
                                                                           = - жоюнонож « GX -
                                                                   KILL
                                                                                                                                      STALP:
                                                                                                                                                  000200R - -
                                                                                                                                                                  992.
BYTE20= 000024
                                                                   LOC.EN= 000100
LOC.WA= 040000
LOC.WB= 100000
                                                                                                     Q$IHRL= 000002
                                                                                                                                      ST3TBL
ST3X
                                                                                                                                                 000000RG
                                                                                                                                                                  002
BYTE21= 000025
                                  BYTE73= 000111
                                                                                                    Q$IMRP=-000007
Q$LBD-=-001000
                                                                                                                                                  000214R
                                                                                                                                                                  002
BYTE22= 000026
BYTE23= 000027
                                  BYTE74= 000112
                                                                                                                                      S$CLR - = -
                                                                                                                                                 000000
                                  BYTE75=:000113
                                                                   LOOP - ******** GX-
                                                                                                     Q$LBDP= 001001
                                                                                                                                             = · 000001
= · 000005
                                                                                                                                      S≸LA
                                                                                                                                                                 .;
                                  BYTE76= 000114
BYTE24= 000030
                                                                   LOOPR = ********** GX
                                                                                                     Q$LBP - - 000001
                                                                                                                                      S$0B
BYTE25= 000031
                                  BYTE77 = 000115
                                                                   MAREN 1 = 000001
                                                                                                     Q$LDCD=-000003
                                                                                                                                      S$QR
                                                                                                                                              = . 000006
BYTE26= 000032
BYTE27= 000033
                                  BYTE78= 000116
                                                                   MAREN2 = 004000
                                                                                                     Q$LDMD= 000004
Q$LDPP= 002000
                                                                                                                                      S$QX
                                                                                                                                              = 000004
                                 BYTE79= 000117
BYTE8 = 000010
                                                                   MARLOD = 010000
                                                                                                                                              = 000007
                                                                                                                                      S$SR
BYTE28= 000034
                                                                   MAROUT= 000002
MAR.LO= 002000
MAR.OU= 000040
                                                                                                     Q$LHP - 010000
                                                                                                                                      S$S1
                                                                                                                                               = 0000010
BYTE29=-000035
BYTE3 =-000003
                                  BYTE80= 000120
                                                                                                    Q$MNC -- 140000
Q$MR -- 000052
                                                                                                                                      S$S2 = 000014 = TD$CTR= 176370
                                  BYTE81= 000121
BYTE30= · 000036
                                  BYTE82=-000122
                                                                   MBKALL = . 001000
                                                                                                     Q$MRP - = - 000040
                                                                                                                                      TD$CTW= 176360
TD$INL= 004000
BYTE31 = 000037
                                  BYTE83= . 000123
                                                                   MBKCLK = 000400
MMADRD = 000100
                                                                                                     Q$MRP2= 000240
BYTE32= 0000040
                                  BYTE84= 000124
                                                                                                     Q$MSC - = - 040000
                                                                                                                                       TD$MEM= . 000270
BYTE33= 000041
                                                                   MMLEFT= 000002
MMOE = 000004
                                  BYTE05 - 000125
                                                                                                     Q$MSET= 000004
Q$MSP - 100000
                                                                                                                                       TD$OAR= 176344
BYTE34= 000042
                                 BYTE86=-000126
BYTE87=-000127
                                                                                                                                       TD$0TR= 176346
BYTE35= 000043
                                                                   MMWRTE = 000010
                                                                                                     Q$NCLK= 176000
                                                                                                                                       TD$QPD= 000274
                                                                   MNOBRE = 100000
MNOBRE = 100000
MREN1 = 000001
MREN2 = 020000
MSYN = 000040
BYTE36 = 000044
BYTE37 = 000045
                                  BYTE88= 000130
                                                                                                     OSPP.
                                                                                                             = 00010<u>0</u>
                                                                                                                                      TD$$11 = 126376.7777.0787
YD$TAR***197637276.7777.0787
                                 BYTE89= 000131
BYTE9 = 000011
                                                                                                     Q$PPSW= 000320
BYTE38 - 000046
                                                                                                    Q$PP2.=.000300
Q$QHLT=.000013
                                                                                                                                       TD$TAW= 17,6362, . . . . .
BYTE39= 000047
                                                                                                                                       TD$TDR= 176374
                                              Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3
```

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```
BCREST MAR-80 14:35 PAGE 6-3
SYMBOL TA
                                          Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3
TD$TDW= 176364
                               T$RNB - = - 999949
                                                               WORD23=-000056
                                                                                              WORD5 = 000012
                                                                                                                              WORD76=-000230
T$AD - 000020
                               T$RSET= 040000
                                                              WORD24= 000060
WORD25= 000062
                                                                                              WORD50= 000144
                                                                                                                              WORD77= 000232
WORD78= 000234
T$BA - = 0000002
                                      = 000022
                               T$SC:
                                                                                              WORD51= 000146
T$BD: =:000010
                               T$SCLK=-020000
T$SEG1=-000000
                                                               WORD26=.000064
                                                                                              WORD52≃.000150
                                                                                                                              WORD79= 000236
T$BSO - = 100000
                                                              WORD27= 000066
                                                                                              WORD53= 000152
                                                                                                                              WORD8 =
                                                                                                                                        000020
T$BT- =-000020
                               T$SEG2= 000001
                                                              WORD28= 000070
WORD29= 000072
WORD3 = 000006
                                                                                              WORD54= 000154
                                                                                                                             WORD80= 000240
WORD81= 000242
WORD82= 000244
T$BTAR= 000030
                               T$SEG3=-000002
                                                                                              WORD55= 000156
T$BTD:=:000030
T$CD:=:000100
                               T$SO· = 0000001
                                                                                              WORD56= 000160
WORD57= 000162
                               T$UBUS= 100000
                                                               WORD30= 000074
                                                                                                                              WORD83= 000246
T$CLK - - 002000
                               T$1CLK= 000400
                                                              WORD31= 000076
                                                                                              WORD58= 000164
                                                                                                                             WORD84= 000250
WORD85= 000252
T$DISK=-000200
T$DRD-=-000004
                               T$8BEN= 000020
                                                              WORD32=-000076
WORD32=-000100
WORD33=-000102
                                                                                              WORD59=-000166
                               UBD.IN=-000020
UNPK- =-******** GX-
                                                                                              WORD6 = 000014
                                                                                                                              WORD86= 000254
T$EMEM= 010000
                                                              WORD34= 000104
WORD35= 000106
                                                                                              WORD60= 000170
                                                                                                                             WORD87≕ 000256
T$FSAA= 000000
                               WORD0 = 000000
                                                                                              WORD61=.000172
                                                                                                                             WORD88= 000260
T$F$AB= 000004
                               WORD1 = 000002
                                                               WORD36 = . 000110
                                                                                              WORD62 = 000174
WORD63 = 000176
                                                                                                                             WORD89= 000262
WORD9 = 000022
T$FSAC= 000014
                               WORD10= 000024
                                                              WORD37= 000112
T$FSB2=-000010
T$IB- =-000026
                               WORD11= 000026
                                                              WORD38= 000114
                                                                                              WORD64= 000200
                                                                                                                             WORD90 = 000264
WORD91 = 000266
                               WORD12= 000030
                                                              WORD39= 000116
                                                                                              WORD65= 000202
T$IBAR= 000024
                               WORD13=-000032
WORD14=-000034
                                                               WORD4 = 000010
                                                                                              WORD66=.000204
WORD67=.000206
                                                                                                                             WORD92= 000270
T$IBE - - 020000
T$IBF - - 040000
                                                              WORD40= 000120
WORD41= 000122
WORD42= 000124
                                                                                                                             WORD93= 000272
WORD94= 000274
                               WORD15= 000036
                                                                                              WORD68= 000210
T$ICD -- 000040
                               WORD16=-000040
WORD17=-000042
                                                                                              WORD69= 000212
WORD7 = 000016
                                                                                                                             WORD95= 000276
T$MODE = 004000
T$08 = 000036
T$08E = 004000
                                                              WORD43= 000126
                                                                                                                             WORD96 = 000300
WORD97 = 000302
                               WORD18 = 000044
                                                              WORD44= 000130
                                                                                              WORD70= 000214
                               WORD19= 000046
                                                              WORD45= 000132
                                                                                              WORD71=-000216
                                                                                                                             WORD98= 000304
T$0BF -- 010000
                               WORD2 - 000004
WORD20 - 000050
                                                              WORD46= 000134
                                                                                              WORDZ2= 000220
                                                                                                                             WORD99= 000306
T$0BRA= 000034
                                                              WORD47= 000136
                                                                                              WORD73= 000222
                                                                                                                             WRDVAL = 000310
XTREAD = 001000
T$0BWA= 000032
                               WORD21=-000052
                                                              WORD48 = . 000140
                                                                                              WORD74= 000224
T$0UTA=-100000
                               WORD22= 000054
                                                              WORD49= 000142
                                                                                              WORD75= 000226
                                                                                                                             XTURTE = . 000400
T$RBD0= 000200
. ABS.
          равава
                        000
          равава
                        001
BCREST.
          000446
                        992
ERRORS DETECTED:
                       0
```

- Almandador

.FITLE - PPS - PSECT - PPS -

HARDWARE QUERY RESOLVER "MANUAL" DEBUGGING AIDS PIPELINE PROCESSORS

PARSE THE COMMAND LINE AND TRANSFER CONTROL TO ONE OF THE PPS SUB-MODULES OR BACK TO OMAIN. CONTROL COULD HAVE BEEN PASSED TO PPS IN ONE OF THREE WAYS:

1. FROM OMAIN IF PPS WAS SELECTED AS THE FIRST PROCESSOR UPON ENTRY TO THE PROGRAM.

- 2. FROM. QMAIN. IF.PPS.WAS.SELECTED. FROM.ONE OF.QMAIN.'S.OTHER.SUB-MODULES.
 CP>PP.LD.QU. 0
 3. ON.RETURN FROM.ONE.OF.PPS.'S.SUB-MODULES
- PP>LD · QW · Ø

PPS-PARSES AT THE SECOND LEVEL OF CONTROL (SEE NOTES AT QMAIN ON LEVELS OF CONTROL). IN THE EXAMPLES ABOVE, PPS WOULD PARSE 'LD' AND TRANSFER CONTROL TO THE PPS SUBMODULE PPLD. IF PPS SHOULD ENCOUNTER A STRING WHICH IS NOT A VALID COMMAND MNEMONIC, PPS CONSIDERS THE STRING TO BE A PROCESSOR MNEMONIC AND RETURNS CONTROL TO QMAIN. EG: PPSCP-LD-CS-0

THE STRING 'CP' IS NOT A VALID PPS (SECOND LEVEL) COMMAND. PPS RETURNS CONTROL TO GMAIN WHICH IN TURN WILL TRANSFER CONTROL TO ITS SUB-MODULE CP.

PPS-SUB-MODULES: PPLD. LOAD MEMORIES. PPPR PRINT MEMORY CONTENTS PPREST ALL OTHER PPS COMMANDS PPPR

CONTROL.TO.ITS.SUB-MODULE.CP.

.MCALL: WTSE\$S.CLEF\$S

```
PPS- --- MACRO M1110 27-MAR-80 15:26 PAGE 6
                                                Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
       40
41
42
43
44
45
46
                                                                      \begin{tabular}{ll} TABLE \cdot OF \cdot PPS & COMMAND \cdot MNEMONICS \cdot AND \cdot THEIR \cdot ASSOCIATED \\ ROUTINE \cdot ADDRESSES \cdot \\ \end{tabular}
           000000
                                                          PPTBL:
       47
48
           000000
                                       124
                                                                      .ASCII.
.WORD.
                                                                                 /ST/
ST4
/RE/
                                                                                                                     :STORE INTO A REG
           000002
000004
                       000000G
       49
50
                            122
                                       105
                                                                      .ASCII
                                                                                                                     ;READ FROM A REG
           000006
                       000000G
                                                                      .WORD
.ASCII
.WORD
       51
52
53
54
           000010
000012
000014
                                       104
                                                                                 /LD/
LD4
                                                                                                                     :LOAD · MEMORY ·
                       000000G
                           120
                                       122
                                                                      .ASCII
                                                                                                                     :PRINT.FROM.MEMORY.
            000016
                       000000G
                                                                       .WORD
                                                                                  PPPR4
       55
56
57
58
            000020
                            105
                                       122
                                                                      .ASCII
                                                                                  /ER/
                                                                                                                     :MEMORY-ERASE
                        700000G
           000022
000024
                                                                                 ER4
                       120
000000G
                                       123
                                                                      .ASCII
                                                                                  ZPSZ
                                                                                                                     : PAGE - SWITCH
            000026
                                                                      .WORD
                                                                                 PS4
       59
60
61
63
64
65
66
           000030
                            103
                                       114
                                                                      .ASCII
                                                                                  ZCLZ
                                                                                                                     :CALL - QR - LOADER -
                       ออออ์อัอ<u>อ</u>G
           000032
                                                                      .WORD
                                                                                 CL4
                       000007
                                                          PPHUM-
                                                                                  <.-PPTBL>/4
                                                                      CODE FOR MEMORY SELECTION
           000034
                       000000
                                                          CODE::
                                                                      .WORD
```

```
PPS-----MACRO-M1110 27-MAR-80 15:26 PAGE 8 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
     120
    121
122
                                                        SET-UP-0-REGISTER
     123
     125 000206
                                               QREG::
    126
127
        000206
                  012746
                           00200
                                                        MOV.
                                                                  #<PLR:EN>,-(SP)
    127 000212
128 000216
                                                                                              ;BIT-PATTERN-FOR-PLR RIGHT
                                                        CALL
                                                                                             MRPCR
                  012746
                            000200
                                                                  #RGQ.EN,-(SP)
    129 000222
                                                        CALL
                                                                  LBMRP
    130 000226
                  012746
                            0002A2
                                                        MOV.
                                                                  #<PLR:EN+MMLEFT>,-(SP)
    131 000232
132 000236
                                                        CALL:
                                                                  MRPCR
                  012746
                            020000
                                                        MOV.
                                                                  #RGQ.VAL,-(SP)
        000242
                                                        CALL
                                                                  LBMRP .
    134 000246
                  016646
                           000002
                                                        MOV.
                                                                  2(SP),-(SP)
                                                                                              :SEND QEX ADDRESS
    i35
        000252
    136
                                                        CALL
                                                                 LBMRP .
    137
                                                        EXTRA-CLOCK-FOR-PPS-
    138
    139
        000256
000262
                  012746
                           001001
                                                        MOV
                                                                 #<Q$LBD+Q$LBP>,-(SP)
                                                                                              :CLEAR DRIVE AND PULSE :CLEAR SELECTION BITS
    140
                  052716
012746
                           000360
                                                                 #Q$CSEL,(SP)
#Q$NCLK,-(SP)
                                                        BIS
    141
         000266
                            176000
                                                        MOV
                                                                                              :SET NO-CLOCKS
    142
        000272
                  052716
                           000300
                                                        BIS.
                                                                 #Q$PP2,(SP)
    143
        000276
                                                                                              ;SELECT PPS
                                                        CALL
    145
        000302
                  012746
                           006000
                                                                                             CLEAR PPS NO-CLOCK
                                                        MOV.
                                                                 #Q$RNC,-(SP)
    146
147
        000306
                  005046
                                                        CLR.
        000310
                                                                 -(SP)
                                                        CALL.
                                                                 CSR1
    148
    149
                                                        DE-SELECTION
    150
        000314
                 012746
052716
                           001001
                                                       MOV
                                                                 #<Q$LBD+Q$LBP>,-(SP)
                                                                                             CLEAR DRIVE AND PULSE CLEAR SELECTION BITS
    152.000320
                           000360
                                                       BIS
                                                                 #Q$CSEL.(SP)
   153
154
        000324
                  012746
                           176000
                                                       MOV-
                                                                 #Q$NCLK,-(SP)
                                                                                              ;SET-NO-CLOCKS-
        000330
                                                        CALL
        000334
                  011666
                           000002
                                                       MOV.
                                                                 (SP),2(SP)
                                                                                             :MOVE RETURN ADDRESS DOWN STACK:
POTENTO RETURN ADDRESS
    157
        000340
                 005726
                                                        TST.
                                                                 (SP) +
    158 000342
                                                       RETURN
```

PPS-----MACRO-M110 27-MAR-80 15:26 PAGE-10 Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3

203 204

000001

.END

```
0 M1110 27-MAR-80 15:26 PAGE 10-1
Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3
SYMBOL TA
ALUCKE = . 040000
                              BYTE42=:000052
                                                             BYTE94= 000136
                                                                                           MREN2 - - 020000
                                                                                                                         Q$MSET= 000004
ALUOE -- 004000
A01 -- 010000
                                                                                           BYTE43= 0000053
                                                                                                                    ″√√¶g⊈MSP ≅ 100000
                                                             BYTE95= 000137
                              BYTE44= 000054
                                                             BYTE96=: 000140
                                                                                                                         Q$NCLK= 176000
                              BYTE45= 000055
8ITVAL= 000000
                                                             BYTE97 = 000141
                                                                                                  = .000144
                                                                                                                         0¢PP
                                                                                                                                = - 000100
BIT0 = 000001
BIT1 = 000002
                              BYTE46= 000056
BYTE47= 000057
                                                             BYTE98= 000142
                                                                                           PLB
                                                                                                  - 0000 ig
                                                                                                                         Q$PPSW= 000320
                                                             BYTE99= 000143
                                                                                           PLC.
                                                                                                  = 000020
                                                                                                                         Q$PP2 - = . 000300
                                                             BYTVAL = . 000144
BIT10
       = 002000
                              BYTE48=:000060
                                                                                           PLD
                                                                                                  = -000030
                                                                                                                         Q$QHLT= 000013
BIT11 = 004000
                              BYTE49= 000061
                                                             CBKALL = . 001000
                                                                                           PLRWR - = - 000200
                                                                                                                         0$0L = 000043
0$0LA = 000053
BIT12 -- 010000
                              BYTE5 = 000005
                                                             CBKCLK = · 000400
                                                                                           PLR.EN= 000200
BIT13 = 020000
                              BYTE50= 000062
                                                                    = ****** GX
                                                             01.4
                                                                                           PPNUM - - 000007
                                                                                                                         Q$QLB · = · 000054
BIT14 = 040000
BIT15 = 100000
3IT2 = 000004
                              BYTE51=-000063
BYTE52-000064
BYTE53=-000065
                                                             CNOBRE = 100000
                                                                                                                         Q$QLR · = · 000001
Q$QW = · 000042
                                                                                           PPPR4 = ******** GX
                                                                       000034RG
                                                             CODE:
                                                                                           PPS.
                                                                                                     000036RG
                                                                                                                    002 · Q$QW
                                                            COMXX:=:******* GX
CPCCEN=:010000
                                                                                                     000116RG
                                                                                                                    002 · Q$RDCD = · 000005
        = 000010
                              BYTE54= 0000066
                                                                                           PPTBL -
                                                                                                     000000R
                                                                                                                         Q$RDMD=-000006
        = · 000020
= · 000040
81T4
                              BYTE55= 000067
                                                             CPREAD = - 040000
                                                                                                                         Q$REBK = 001000
Q$RNC = 006000
Q$R$C = 004000
                                                                                           PS4
                                                                                                   = · ******* GX ·
BIT5
                              BYTE56= 000070
BYTE57= 000071
                                                             CPWRTE = - 020000
                                                                                                     000206PG
                                                                                                                    002
                                                                                           OREG
        = 000100
BIT6
                                                             CSADRD = 0000004
                                                                                           QR$CR1=:176420
        = 000200
BIT7
                              BYTE58=-000072
                                                             CSEQCI = 100000
                                                                                           QR$CR2= 176422
                                                                                                                         Q$RSET= 000010
                                                            = 000400
                              BYTE59= 000073
                                                                                           DR$LBR= 176424
                                                                                                                         ~O$SM = 100000
-Q$SP = 000120
BIT9
        = 001000
                              BYTE6 = 000006
                                                                                           Q$ATTN= 000100
BYTE0 = 000000
                                                                                           Q$BCL -- 000001
Q$CCCP- 000040
                              BYTE60 = 000074
BYTE61 = 000075
                                                             CSWRTE=-000100
                                                                                                                         Q$SP2 - - 000340
BYTE1 = 000001
                                                             DBR.RD= 000001
                                                                                                                         RE4
BYTE10= 0000012
                              BYTE62= 000076
                                                             DB$CPP=:001457
                                                                                                                         RGQ.EN= 000200
                                                                                           Q$CHB - - 000400
BYTE11= 0000013
                              BYTE63=.000077
                                                             DB$SPT= 000026
                                                                                           Q$CHRL= 000200
                                                                                                                         RGQ:VA=-020000
SCAN =-*****
BYTE12= 0000014
                              BYTE64= . 000100
                                                            DB$TPC=-000023
DISPGS=-100000
                                                                                           Q$CLR - = - 000040
BYTE13= 0000015
                              BYTE65= 000101
                                                                                                                         SEQ.CI= 000010
STQP 000344
                                                                                           Q$CNC -- 030000
BYTE14= 0000016
                              BYTE66= 000102
                                                             DMAAWR = . 000005
                                                                                           Q$CP - 000060
                                                                                                                                   000344RG
                                                                                                                                                   002
BYTE15= 000017
                              BYTE67 = 000103
BYTE68 = 000104
                                                             DMARRD = . 000003
                                                                                           Q$CPCC= 000010
                                                                                                                                 = ****** GX
                                                                                                                         ST4
BYTE16= 000020
                                                                                           Q$CP2.=.000260
Q$CSC.=.010000
Q$CSEL=.000360
                                                             DMARWR = - 000004
                                                                                                                         $$CLR - = 000000
BYTE17= 000021
                              BYTE69= 000105
                                                             ENBR - - 010000
                                                                                                                               = 000001
= 000005
                                                                                                                         S$LA
BYTE18=-000022
                              BYTE7 = 000007
                                                             ERR12 -- ***** GX
                                                                                                                         S$08
BYTE19= 000023
BYTE2 = 000002
                              BYTE70= 000106
BYTE71= 000107
                                                             ERR3
                                                                    = · ******** GX
                                                                                           Q$CSET= .000002
                                                                                                                         S$QR
                                                                                                                                   000006
                                                             ERR8
                                                                    = · жижижиж GX ·
                                                                                           Q$CSP.=.020000
Q$DMA.=.000001
                                                                                                                         S$QX
BYTE20= · 000024
                              BYTE72= 000110
                                                             ER4
                                                                    = · ***** GX
                                                                                                                                = 000007
= 000010
                                                                                                                         S≸SR
BYTE21 = 000025
BYTE22 = 000026
                              BYTE73= 000111
                                                                    = · ******* GX
                                                             FIND
                                                                                           Q$ENBK = . 040000
                                                                                                                         9$91
                                                            GCMBLK = · ****** GX
GCONLY = · ****** GX
                              BYTE74= . 000112
                                                                                           Q$ENOP = . 020000
                                                                                                                                 = 000014
                                                                                                                         S$S2
BYTE23= 000027
                              BYTE75= 000113
                                                                                           Q$FAL - 004000
Q$FC - 000045
                                                                                                                          TD$CTR= 176370
BYTE24= · 000030
                              BYTE76= 000114
                                                             G.DPRM= ******* GX
                                                                                                                         TD$CTW= 176360
TD$INL= 004000
BYTE25= 000031
                              BYTE77=-000115
                                                             LBMRP - = · ****** GX
                                                                                           OSEO.
                                                                                                 = 0000044
BYTE26=: 000032
                                                                    = · ****** GX
                              BYTE78= 000116
                                                                                           Q$FP - 0000046
Q$HBF - 000002
                                                             LD4
                                                                                                                          TD$MEM=:7000270
BYTE27 = 000033
                              BYTE79= 000117
                                                             LOC.EN= 000100
                                                                                                                         TD$0AR= 176344
TD$0TR=7176346
TD$QRD= 000274
9YTE28=-000034
                               BYTE8 = .000010
                                                             LOC.WA= 040000
                                                                                           Q$ICP - 000006
⊵YTE29=:000035
                              BYTE80= 000120
                                                             LOC.WB= 100000
                                                                                           Q$IHB - = - 000003
BYTE3 = 000003
                              BYTE81= 000121
                                                             MAREN 1 = 000001
                                                                                           Q$IHRL=.000002
Q$IMRP=.000007
                                                                                                                          TD$SW·=·176376
BYTE30 - 000036
                               DYTE02 - 000122
                                                             MAREN2 = 004000
                                                                                                                          TD$TAR= . 176372
BYTE31= 000037
                              BYTE83=-000123
                                                             MARLOD = . 010000
                                                                                           Q$LBD - = - 001000
                                                                                                                          TD$TAbl= 176362
BYTE32= 000040
                              BYTE84= 000124
                                                             MAROUT= . 000002
                                                                                           Q$LBDP= 001001
                                                                                                                          TD$TDR= · 176374
BYTE33= 000041
                               BYTE85 = . 000125
                                                             MAR:L0= 002000
                                                                                           Q$LBP - - . 000001
                                                                                                                          TD$TDW= · 176364
BYTE34= 000042
                                                                                                                         T$AD = 000020

T$BD = 000002

T$BD = 000010

T$BD = 000020

T$BT = 000020
                               BYTE86= 000126
                                                                                           0$LDCD=:000003
                                                             MAR.OU= 900040
BYTE35= 000043
                               BYTE87 = . 000127
                                                             MBKALL= 001000
                                                                                           Q$LDMD= 000004
BYTE36 = . 000044
                               BYTE88 = . 000130
                                                             MBKCLK = - 000400
                                                                                           Q$LDPP=:002000
BYTE37 = . 000045
                              BYTE89= 000131
                                                                                           Q$LHP = 010000
Q$MNC = 140000
                                                             MMADRD = - AAA LAA
BYTE38= 000046
                              BYTE9 = 000011
                                                             MMLEFT= : 000002
BYTE39=.000047
                              BYTE90=-000132
                                                                    = 000004
                                                                                           Q$MR -
                                                                                                  = 0000052
                                                                                                                          T$BTAR = . 000030
BYTE4 = 000004
                                                             MMURTE = . 000010
                              BYTE91= 000133
                                                                                           Q$MRP - = . 000040
                                                                                                                          T$8TD·=·002000
                                                            MMURIE - 00001
MNOBRE - 100000
MRFN1 - 000001
BYTE40= 000050
                              BYTE92= 000134
                                                                                           Q$MRP2= 000240
                                                                                                                                 = 000100
                                                                                                                          T#CD
BYTE41 = . 000051
                              BYTE93 = . 000135
                                                                                                                          T$CLK = 002000
                                          Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
```

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PPS-----MACRO-M1110 27-MAR-80 15:26 PAGE 10-2
SYMBOL TABLE Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
SYMBOL TABLE
                                                                     WORD29=-000072-
T$DISK = .000200
                                   T$S0 -
                                          = 0000001
                                                                                                       WORD53 = . 000152 .
                                                                                                                                          WORD78= 000234
                                                                                                                                          WORD79= 000236
WORD8 = 000020
T$DRD - - 000004
                                   T$UBUS= 100000
                                                                     WORD3 - 000006
                                                                                                       WORD54= 000154
T$EMEM= .010000
T$FSAA= .000000
                                  T$1CLK=-000400
T$8BEN=-000020
                                                                     WORD30=.000074
                                                                                                       WORD55= 000156
                                                                     WORD31=-000076
                                                                                                       WORD56= 000160
                                                                                                                                          MORDSO = · 000240
T$FSAB=:000004
                                   UBD.IN= 000020
                                                                     WORD32--000100
                                                                                                       WORD57= 000162
                                                                                                                                          WORD81 = . 000242
T$FSAC= 000014
                                  WORD0 = 000000
WORD1 = 000002
                                                                                                       WORD58=-000164
WORD59=-000166
                                                                                                                                          WORD82= 000244
WORD83= 000246
                                                                     WORD33=-000102
T$FSB2= 000010
                                                                     WORD34= 000104
T$IB: =:000026
                                   WORD10= 0000024
                                                                     WORD35 = . 000106
                                                                                                       WORD6 = 000014
                                                                                                                                          WORD84= 000250
T$IBAR=.000024
T$IBE.=.020000
T$IBF.=.040000
                                  WORD11=-000026
WORD12=-000030
WORD13=-000032
                                                                                                       WORD60=-0000170
WORD61=-000172-
WORD62=-000174
                                                                     WORD36=-000110
WORD37=-000112
                                                                                                                                          WORD85=-000252
                                                                                                                                          WORD86 = 000254
WORD87 = 000256
                                                                     WORD38= 000114
                                   WORD14= 000034
                                                                     WORD39=-000116
                                                                                                                                          WORD88= 000260
T$ICD - = -000040
                                                                                                        WORD63--000176
T$MODE = . 004000
T$OB - . 000036
                                  WORD15= 000036
WORD16= 000040
                                                                                                                                          WORD89=-000262
WORD9 =-000022
WORD90=-000264
                                                                     WORD4 = 000010
WORD40= 000120
                                                                                                       WORD64=-000200
                                                                                                       WORD65= 000202
T$0BE - = - 004000
                                   WORD17= 0000042
                                                                     WORD41 = 000122
                                                                                                       WORD66 = 000204
î$OBF·=·010000
                                   WORD18= 000044
                                                                     WORD42= 000124
                                                                                                       WORD67= 000206
                                                                                                                                          WORD91=-000266
T$0BRA=-000034
T$0BWA=-000032
T$0UTA=-100000
T$RBDO=-000200
                                  WORD19=-000046
WORD2-=-000004
                                                                     WORD43= 000126
                                                                                                        WORD68= 000210
                                                                                                                                          WORD92= 000270
                                                                                                       WORD69= 000212
WORD7 = 000016
WORD70= 000214
                                                                                                                                          WORD93=:000274
WORD94=:000274
WORD95=:000276
WORD96=:000300
                                                                     WORD44= 000130
                                  WORD20=-000050
WORD21=-000052
WORD22=-000054
                                                                     WORD45= 000132
WORD46= 000134
T$RNB - = - 0000040
                                                                     WORD47=-000136
                                                                                                        WORD71=-000216
T$RSET=:040000
T$SC: =:000022:
T$SCLK=:020000
                                   WORD23=-000056
                                                                     WORD48=-000140
                                                                                                        WORD72=-000220
                                                                                                                                          WORD97= 000302
                                                                                                       WORD73= 0000222
WORD74= 000224
WORD75= 000226
                                                                     WORD49= 000142
WORD5 = 000012
                                   WORD24= 0000060
                                                                                                                                          WORD98=-000304
                                   MORD25= 000062
                                                                                                                                          WORD99=.000306
T$SEG1 = . 000000
                                   WORD26=-000064
                                                                     WORD50= 000144
                                                                                                                                          WRDVAL = . 000310
                                                                                                                                         XTREAD= 001000.
XTURTE= 000400.
T$5EG2=-000001
                                   WORD27=-000066
                                                                     WORD51= 000146
                                                                                                        WORD76= 000230
T$SEG3 = . 0000002
                                   WORD28 = . 000070
                                                                     WORD52=-000150
                                                                                                        WORD77= 000232
            000000
                           000
            000000
                            001
pps
            000464
                           002
ERRORS DETECTED:
                          0
VIRTUAL : MEMORY : USED:
                               3251 WORDS: (-13 PAGES)
DYNAMIC MEMORY: 3860 WORDS ( 14 PAGES)
ELAPSED TIME: 00:00:43
PPS,PPS/-SP=[20,1]IM.[20,1]PPS
```

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PPLD----MACRO M1110 27-MAR-80 15:23 PAGE 5
Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
                123456789011
                                                                                                                                                             .FITLE .. PPLD
                         000000
                                                                                                                                                            .PSECT PPLD
                                                                                                                                                           MARDWARE QUERY RESOLVER 'MANUAL' DEBUGGING AIDS PIPELINED PROCESSORS: TEST ROUTINES
                                                                                                                                                           COMMANDS: .
LD LOAD PPS MEMORIES
                                                                                                                                                           ONCE A COMMAND HAS BBEN EXECUTED (OR AN ERROR ENCOUNTERED) THIS MODULE RETURNS CONTROL TO THE MODULE PPS. AT COCATION
               12
                14
15
                 16
                                                                                                                                        ************
                 17
18
                                                                                                                                                           NOTE:
                                                                                                                                                          THE COMMANDS TO LOAD OEX MEMORIES CANNOT BE USED UNLESS MRP MICROPROGRAM MEMORY AND CP CONTROL STORE HAVE BEEN LOADED VIA THE 'LOADER' PROGRAM GEX LOADING MAKES USE OF CP DATA MEMORY THE PREVIOUS CONTENTS OF THAT MEMORY ARE DESTROYED:
               20
21
22
23
              24
25
26
27
28
29
                                                                                                                                       30
31
                                                                                                                                                           .MCALL - WTSE$S,CLEF$S
               32
              33
34
35
                                                                                                                                                          \label{thm:table} \begin{array}{l} {\sf TABLE} \cdot {\sf OF} \cdot {\sf VALID} \cdot {\sf PPS} \cdot {\sf MEMORY} \cdot {\sf MNEMONICS} \cdot {\sf AND} \cdot {\sf ADDRESSES} \cdot {\sf OF} \\ {\sf ASSOCIATED} \cdot {\sf ROUTINES} \cdot \end{array}
              36
                        000000
                                                                                                                                LD4TBL::
                        000000
                                                            121
                                                                                      127
                                                                                                                                                           .ASCII-
                                                                                                                                                                                    Z01dZ
                                                                                                                                                                                                                                                                  :QEX.WINDOW.MEMORY
              38
                        000002
                                                   000322
                                                                                                                                                           .WORD
                                                                                                                                                                                   LD40W
                       000004
000006
              39
                                                                                      114
                                                                                                                                                           .ASCII
                                                                                                                                                                                    /QL/
                                                                                                                                                                                                                                                                  ;QEX-LOCATION-MEMORY
              40
                                                  0003323
                                                                                                                                                           .Laneb.
                                                                                                                                                                                    LD4QL
              41
                        000010
                                                            186
                                                                                      120
                                                                                                                                                           .ASCII
                                                                                                                                                                                    /FP/
                                                                                                                                                                                                                                                                  :FAL . POINTER . MEMORY
              42
                        000012
                                                  000662
                                                                                                                                                           .WORD
                                                                                                                                                                                   LD4FP
                       000014
000016
              43
                                                            106
                                                                                      103
                                                                                                                                                           .ASCII
.WORD
                                                                                                                                                                                                                                                                  :FAL . COUNTER . MEMORY
              44
                                                  000672
                                                                                                                                                                                    LD4FC
                        000020
                                                            121
                                                                                      122
                                                                                                                                                           .ASCII
                                                                                                                                                                                    /QR/
                                                                                                                                                                                                                                                                  ;QLB·REFERENCE·PAGE
              46
                        000022
                                                  001164
                                                                                                                                                           .WORD
.ASCII.
.WORD
                                                                                                                                                                                   LD40R
              47
                       000024
000026
                                                                                      060
                                                                                                                                                                                    /00/
                                                                                                                                                                                                                                                                  :QLB-PAGE-0
              48
                                                  001450
                                                                                                                                                                                   LD400
              49
                        000030
                                                            121
                                                                                      061
                                                                                                                                                           .ASCII
                                                                                                                                                                                    /01/
                                                                                                                                                                                                                                                                  :QLB-PAGE-1
              50
                       000032
                                                  001456
                                                                                                                                                           .WORD
                                                                                                                                                                                   LD401
            51
52
53
54
55
                       000034
                                                            121
                                                                                                                                                           .ASCII
                                                                                                                                                                                                                                                                  :QLB-PAGE-2
                       000036
                                                 001464
                                                                                                                                                                                   LD402
                                                                                                                                                           .WORD
                                                 000010
                                                                                                                               LD4LN
                                                                                                                                                                                    <.-LD4TBL>/4
                                                                                                                                                                                                                                                                                                       MENTAL STREET, STATE OF THE STA
                       000040
                                                000002
                                                                                                                               CDADD:
                                                                                                                                                          .WORD
                                                                                                         57
                     000042
                                                000000
```

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PPLD .... M
                 0-M1110 27-MAR-80 15:23. PAGE-5-1
                                                 Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3
        58 000044
                      CDDAT:
                                                                        .WORD
                                                                                                                       ;DATA FIELD FOR TRANSFER TO CD
;CODE FOR MEMORY SELECTION
                                                                                   Ø
       59
            000046
                       000000
                                                            CODE:
                                                                        .WORD
       60
       61
62
63
                                                                       LOAD
                                                                       PERFORM THIRD LEVEL PARSING EG. IN THE COMMAND:
       64
       65
                                                                       PP>LD:0W:0
       66
67
68
                                                                       PARSE THE ' OU!
            000050
                                                            LD4::
       70
71
           000050
                                                                       CALL
                                                                                   FIND
                                                                                                                       ;LOCATE · MEMORY · NNEMONIC · IN · COMMAND · LINE
           000054
                        103004
                                                                       BCC -
                                                                                   15
                                                                                                                       :OK, CONTINUE:
:"MISSING OPERAND:
           000056
                                                                                   ERR4
                                                                       CALL
       73
            000062
                       000167
                                   001672
        75
                                                                       MATCH: THE: MNEMONIC: IN: THE: COMMAND: LINE: AGAINST: THE: TABLE OF VALID: MNEMONICS:
       76
77
           000066
000072
       78
                       012700
                                   000010
                                                            15:
                                                                       MOV
                                                                                                                 HUMBER OF TABLE ENTRIËS
ROINT TO TABLE
MATCH AGAINST COMMAND LINE
                                                                                   #LD4LN,R0
       79
                       012702
                                   000000
                                                                       MOV.
                                                                                   #LD4TBL,R2.
            000076
                                                                                   SCAN
                                                                       CALL
       81
           000102
                                                                       BCC:
                                                                                   2$
       82
                                                                                                                       :MATCH WAS MADE
           000104
                                                                       CALL
                                                                                   ERR7
                                                                                                                       : "INVALID MEMORY MNEMONIC:
           000110
                       000167
                                   001644
                                                                                   1.04%
       84
85
                                                                       SAVE POINTER TO ROUTINE ASSOCIATED WITH THE MEMORY MNEMONIC SCAN THE REMAINDER OF THE COMMAND LINE FOR CONTROL INFORMATION:
       86
       87
                                                                       1. START-ADDRESS-ONLY, REPEAT-PROMPT-FOR EACH-MEMORY LOCATION-FROM THE START-ADDRESS-FORWARD, NB, END OF MEMORY (AS DETECTED-BY THE QMAIN-SUBROUTINE PDATA) OR A KOR> RESPONSE TO THE PROMPT-
       88
       89
90
       91
                                                                           WILL TERMINATE THE LOAD.
       92
                                                                           PP>LD GW 0
START ADDRESS, LOOP INDICATOR, LOOP ON THE LOADING OF
THIS ONE MEMORY LOCATION ONLY.
       93
       95
                                                                           PP>LD QU 0 L
START ADDRESS, END ADDRESS, NO LOOP, ISSUE ONLY ONE
PROMPT AND FILL MEMORY (BETWEEN START AND END, ADDRESSES)
WITH THIS VALUE.
       97
       99
                                                                           PPALD QUE 07

START ADDRESS, END ADDRESS, LOOP INDICATOR, ISSUE ONLY ONE-
PROMPT AND LOOP ON THE LOADING OF MEMORY (BETWEEN START AND END ADDRESSES) WITH THIS VALUE.
      100
      101
      102
103
                                                                           PP>LD QW 0 7 L
      104
      105
                                                                                                                     :SAVE POINTER:
:LOCATE START ADDRÉSS IN COMMAND LINE
:OK, 7CONTINUE
*MISSING OPERAND:
           000114
      106
                       010167
                                   000000G
                                                                       MOV.
                                                                                  R1,RTHPT
      107
           000120
                                                                       CALL
                                                                                  FIND
           000124
                       103004
                                                                       BCC
                                                                                   3$
      109
           000126
                                                                       CALL
                                                                                  ERR4
     110 000132.
                       000167
                                                                       .IMP -
                                                                                  LD4X
     111
          000136
                                                           3$:
                                                                       CALL
                                                                                                                      CONVERT COMMAND LINE VALUE TO BINARY.
                                                                                  PACK
     112.000142
                       103004
                                                                      BCC
                                                                                  4$
     113 000144
                                                                       CALL
                                                                                  ERR5
                                                                                                                       ; "INVALID NUMERIC VALUE:
     114 000150
                      000167 001604
                                                 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
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PPLD----MACRO-M1110 27-MAR-80 15:23 PAGE_5-2
                                          Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
     115
     116
117
          000154
                    016767
016767
                               000000G · 000000G · 4$:
                                                               MOV
                                                                                                        :SAVE LOADING START ADDRESS :SAVE IT TWICE (FOR REFRESH ON LOOP FOR A CO.
                                                                         BINWD,MSTRT.
BINWD,MSTR2.
          000162
                               000000G · 000000G
     118
          000170
                     012767
                                          000000G
                                                               MOV
                                                                         #-1.MEND
                                                                                                         : JH, HT -END - ADDRESS -
     119
     120
                                                              START ADDRESS HAS BEEN FOUND, SCAN FOR END ADDRESS OR LOOP INDICATOR (CONDITIONS 2, 3 ABOVE), IF THERE IS NOTHING FURTHER IN THE COMMAND LINE, CONDITION 1 IS IN EFFECT.
     121
     122
123
          000176
                                                                                                        SCAN-COMMAND-LINE
SOMETHING THERE
SIGNAL-TO REPEAT-PROMPT
                                                                         FIND
     125
          000202
                     103004
                                                               BCC
                                                                         5$
                               000000G · 000000G
     126
          000204
                     052767
                                                                         #RP.BASE
                                                               BIS
          000212
                    000437
                                                                          9$
                                                                                                         ; JUMP - TO - RTH -
     129
          000214
                     122711
                               000114
                                                              CMPB
                                                                         #:L,(R1)
                                                                                                        ;LOOP - INDICATOR
     139
          000220
                     001006
                                                                                                        *NO. MUST-BE-UPPER-ADDRESS
*SET-END-ADDR-=-START-ADDR
                                                              BNF .
                                                                         6$
     131
          000222
                     016767
                               000000G · 000000G
                                                              MOV.
                                                                         MSTRT, MEND
          000230
                                                               CALL
                                                                         HANG
                                                                                                        :HOW-TO-STOP-LOOP
     133
          000234
                     000426
                                                              BR
                                                                         9$
     134
     135
          000236
                                                              CALL
                                                                         PACK
                                                                                                        :CONVERT-UPPER-ADDRESS
          000242
                     103004
                                                              BCC
                                                                         7$
                                                                                                        ;OK, CONTINUE
     137
          000244
                                                              CALL
                                                                         ERR5
                                                                                                        :INVALID-NUMERIC
     138 000250
                     000167
                                                              JMP.
                                                                         LD4X
                                                                                                        :EXIT
     139
     140
                                                              SAVE-END-ADDRESS-(BINARY)
CHECK-FOR-LOOP-INDICATOR-AFTER-END-ADDRESS (CONDITION-4)
     141
     142
     143
          000254
                    016767
                               000000G.000000G.7$:
                                                                                                        :SET.UP.END.ADDRESS:
:CHECK.FOR LOOP.INDICATOR
                                                              MOV
                                                                         BINWD, MEND
          000262
     144
                                                              CALL
                                                                         FIND
     145
          000266
                     103411
                                                              BCS
                                                                         9$
                                                                                                        :NO-LOOP
     146
                     122711
          000270
                               000114
                                                              CMPB
                                                                         #*L,(R1)
                                                                                                        :CORRECT INDICATOR
     147
          000274
                    001404
                                                              BEQ.
                                                                         8$
                                                                                              ;YES, CONTINUE
;LOOP.OPTION.ERROR
     149
          000276
                                                              CALL
                                                                         ERR11
     149
          000302
                    000167
                               001452
                                                              JMP.
                                                                         1.04%
     150
         000306
                                                              CALL
                                                                         HANG
                                                                                                        :HOW-TO-STOP-LOOP-
     151
     152
         000312
                    016701
                               000000G
                                                                                                        :POINT.TO.ROUTINE
:JUMP.TO.ROUTINE.
                                                    9$:
                                                              MOV-
                                                                         RTHPT.R1
     153 000316
                    000171
                              000000
                                                              JMP
                                                                         @(R1)
     155
                                                                                                                                        .
     156
157
                                                              LOAD · QEX · WINDOW · MEMORY
                                                              LOAD GEX LOCATION MEMORY
     159
     160
         000322
                    012767
                              000042
                                         177516
                                                    LD4QW::
                                                              MOV
                                                                         #Q$QW,CODE
                                                                                                        :SET-MEMORY-SELECT-CODE - = - WINDOW
     16 i
          000330
                    000403
                                                                         OEX-
     162
         000332
                    012767
                               000043
                                                    LD4QL::
                                                             MOV
                                                                         #Q$QL,CODE
                                                                                                        :SET-MEMORY-SELECT-CODE-=-LOCATION
     163
     164
         000340
                    016746
                              ABBBBBB
                                                    QEX:
                                                              MOV.
                                                                         QXHIGH,-(SP)
                                                                                                        ;SUPPLY-UPPER-MEMORY LIMIT:
;LOWER-LIMIT:
;PREPARE-FOR-LOAD-
     165
         000344
                    016746
                              000000G
                                                              MOV.
                                                                         QXLOW,-(SP)
    166
         000350
                                                              CALL
                                                                        BUFSET:
    167
         999354
                    103002
                                                              BCC.
                                                                         1$
                                                                                                              CONTINUE
    168
         000356
                    000167
                              001376
                                                              JMP
                                                                                                                                  A CONTRACTOR
    169
    179
                                                              WRITE DATA FOR GEX INTO CP DATA MEMORY, SKIP CD WORDS 0, 1
(RESERVED FOR WEITE FLAG AND TRANSFER COUNT - SEF AFT OUR
    171
```

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TTE FLAG AND TRANSFER COUNT - SEE BELOW).

```
PPLD - - - M
              RO M1110 27-MAR-80 15:23 PAGE 5-3
                                          Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
                                                            WRITE-DEX-DATA: IN-THE-FORM ADDR, DATA, ADDR, DATA...
WHEN-THE-LOADING-OF-CD IS-<u>COMPL</u>ETED, <u>CALLL</u> THE-SUBROUTINE-
QXLOADD-WHICH-IN-TURN STARTS-UP-THE-MICROCODE TO:LOAD:THE
     172
     173
     175
     176
                              000002
                                                             MOV
          000362
                    012767
                                        177450
                                                                       #2,CDADD.
                                                                                                     #WRITE-INTO-CD-STARTING-AT-LOC 2-
#CLEAR-OEX ADDR/DATA PAIRS-COUNT-
#START-MICROCODE-AT-0
     177
                                                  1$:
          000370
                                                             CLR
                                                                       QXCNT.
                    005067
     179
          000374
                    005046
                                                             CLR
     180 000376
                                                             CAL
                                                                       SECCS
          000402
                                                             CLR
     181
                    005046
                                                                       -(SP)
                                                                                                     :RESET-BR-INHIBIT-
                                                                       CPCR
#377.-(SP)
     182
          000404
                                                             CALL
                              000377
     193
          000410
                    012746
                                                             MOV
                                                                                                     :SET-MRP-MICRO-ADDRESS-- X"FF" (JUMP-SELF)
          000414
                                                                       SEQMM.
     184
                                                             CALL
     185
          000420
                    005046
                                                                       -(SP)
                                                                                                     ; RESET.BR. INHIBIT.
     186
          999422
                                                             CALL
                                                                       MRRCR
                                                                                                                                      --:
                                                             MOV.
                                                                                                     :RE-ARM-INTERRUPTS-
     187
          000426
                    012767
                              001000
                                         176422
                                                                       #Q$REBK,QR$CR2
                                                                                                     SET SEARCH MODE + ENABLE INTERRUPTS CLEAR ALL SELECTIONS
     188
          000434
                    012767
                               120000
                                         176422
                                                             MOV.
                                                                       #<Q$SM+Q$ENOP>,QR$CR2.
                                                                       #Q$CSEL,-(SP)
#<Q$LBD+Q$LBP>,(SP)
                    012746
     189 000442
                              999369
                                                             MOV:
                    052716
052716
          000446
     198
                                                             BIS
                                                                                                     :CLEAR DRIVE AND PULSE
                              ARTART.
      191
          000452
                              030000
                                                             BIS
                                                                       #Q$CHC,(SP)
                                                                                                     ;CLEAR · CP · NO-CLOCK ·
                                                             CLR
                                                                       -(SP)
     192
          000456
                                                                                                     :SET - NOTHING -
      193
          000460
                                                             CALL
                                                                       CSR4
     194
                                                                       #RP,BASE
      195 000464
                    032767
                              000000G · 000000G ·
                                                             BIT.
                                                                                                     ;REPEAT.PROMPT.?.
      196
          000472
                    001430
                                                                       4$
                                                             BEQ
                                                                                                     : NO -
      197
          000474
                                                                       PDATA
                                                                                                     :READ DATA FROM COMMAND LINE ..
                                                             CALL
                                                                                                     :END-OF-MEMORY - LOAD-QEX:
:<CR> RESPONSE - LOAD-QEX:
:WRITE GEX ADDR:TO-CP-DATA-MEMORY:
:LOAD-ONE-WORD:
:WRITE GEX DATA-TO-CP-DATA-MEMORY:
      198
          000500
                     193421
                                                             BCS.
                                                                       3$
                     102420
      199
          000502
                                                             BVS.
                                                                       3.5
                                                                       MSTR2.CDDAT
          000504
     200
                    016767
                              000000G-177332-
                                                             MOV
      201
          000512
                                                             CALL
                                                                       LOADED:
     202-000516
                    016767
                               000000G-177320
                                                             MOS/-
                                                                       DATA1.CDDAT
     203 000524
                                                             CAL!
                                                                       LOADCD:
                                                                                                     :COUNT-NUMBER-OF-QEX ADDR/DATA PAIRS-
:BUMP-LOAD ADDRESS-
     204 000530
                    005267
                               177306
                                                             INC-
                                                                       QXCNT.
          000534
                     066767
      205
                               000000G · 000000G
                                                             ADD
                                                                       INCVAL, MSTR2
      206
          000542
                    000754
                                                                                                     : REPEAT
     207
     208 000544
                                                             CALL.
                                                                       LOADQX
                                                   3$:
                                                                                                     :LOAD QEX
          000550
                     000167
                                                                                                     :EXIT
                                                                       LD4X
     210
                                                             PROMPT ONCE THEN FILL MEMORY
     211
212
      213 000554
                                                             CALL
                                                                       PDATA:
                                                                                                     : PROMPT-
                                                                                                     :END OF MEMORY OR ERROR
     214 000560
215 000562
                     103401
                                                             BCS
                                                                       5$
                     102004
                                                             BMC -
                                                                       6$
                                                                                                     : NORMAL · CONTINUATION
      216
          000564
                                                             CALL
                                                                       LOADQX-
                                                                                                     :LOAD - DEX-
                                                                                                                         217 000570
                     000167
                               001164
                                                             JMP
                                                                                                     :WRITE-QEX ADDR-TO-CP DATA-MEMORY:
:LOAD-ONE-WORD:
:WRITE-QEX DATA-TO-CP-DATA-MEMORY:
      218 000574
219 000602
                                                             MOV-
                     016767
                               000000G-177242-
                                                                       MSTR2.CDDAT
                                                             CALL
                                                                       LOADCD:
      220
          000606
                     016767
                               000000G-177230
                                                                       DATA1.CDDAT
      221
          000614
                                                             CALL
                                                                       LOADED
                                                                                                    QXCHT.
INCVAL, MSTR2.
      222 - 999629
                     005267
                               177216
                                                             THE
      223 000624
                     066767
                               000000G · 000000G ·
                                                             ADD
      224 000632
                     026767
                               000000G 000000G
                                                                       MSTR2, MEND
                                                             CMP
     225 000640
                     101755
                                                             BLOS
                                                                       6$
                                                                                                     :NO, CONTINUE
                                                                       LOADQX-
     226 000642
                                                  7$:
                                                             CALL
                                                                                                     ;LOAD QEX:
;LOOP ON ?
     227
                    032767
                              000000G-000000G-
                                                                       #LOOP,BASE
          000646
                                                             BIT
                                          Approved For Release 2005/07/12 : CIA-RDP85-00-148-00020001.3
                    001372
```

```
PPLD----MACRO-M1110 27-MAR+80 15:23 PAGE-5-4
                                      Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
    229 000656 000167
                          001076
                                                        IMP
                                                                                             :ELSE EXIT
    230
    231
                                                       FAL POINTER MEMORY
    233
234
235
                                                       FAL COUNTER MEMORY
    236
237
         000662
                  012767
                            000046
                                     177156
                                              LD4FP::
                                                       MOV
                                                                 #Q$FP,CODE
                                                                                             :SET MEMORY SELECT CODE PO INTER
         000670
                  ййй4й3
                                                                 FAL
         000672
                  012767
                            000045
                                              LD4FC::
                                                       MOV
                                                                                             :SETាបែRY SELECT CODE = COUNTER
                                                                 #Q$FC,CODE
    249
         000700
                  ð16746
                            000000G
                                              FAL:
                                                       MOM
                                                                 FAHIGH,-(SP)
                                                                                             SUPPLY UPPER MEMORY LIMIT
    241
         000704
                                                                 FALOW,-(SP)
BUFSET
                  016746
                            000000G
                                                       MOV.
                                                                                             :COWER-LIMIT
    242
         000710
                                                        CALL
                                                                                             :PREPARE FOR LOAD :OK, CONTINUE
    243
         000714
                   103002
                                                       BCC
                                                                 1$
    244
         000716
                  000167
                                                        JMP.
                                                                 LD4X
                                                                                             ;ERROR, EXIT
    245
         000722
000730
    246
                  032767
                            000000G 000000G 1$:
                                                       BIT
                                                                 #RP,BASE
                                                                                             :REPEAT PROMPT
    247
                  001436
                                                       BEO
                                                                 5$
                                                                                             :NO: ONCE:ONLY
    248
         000732
                                                                                           AL READ DATA FROM COMMAND LINE
                                                       CALL
                                                                 PDATA
    249
         000736
                   103401
                                                       BCS
                                                                 3$
                                                                                             :END OF MEMORY
    250
         000740
                   102006
                                                       BVC
                                                                 4$
                                                                                             :NO <CR> RESPONSE, CONTINUE
    251
         000742
                           077777
                  012746
                                              3$:
                                                       MOV
                                                                                             :VALUE FOR QCL POINTER
:LOAD QCL POINTER
    252
         000746
                                                       CALL
                                                                 STQP
    253
         000752
                  000167
                           001002
                                                        JMP
                                                                 1.04%
    255
256
         000756
                  016746
                           000000G
                                                       MOV-
                                              4$:
                                                                 MSTR2,-(SP)
                                                                                             :LOAD-ADDR INTO-QCL-POINTER
         000762
                                                       CA_L
                                                                 STOP
    257
         000766
                  016746
                            177054
                                                       MOV
                                                                 CODE.-(SP)
                                                                                             :SELECT-MEMORY
    258
         000772
                                                       CALL
                                                                 PPCR
                                                                                             : WRITE SELECTION TO CONTROL REG
         000776
                  016746
                           000000G
                                                       MOV-
                                                                 DATA1,-(SP)
                                                                                             :SEND DATA WORD; TO FAL MEMORY
    260
         001002
                                                       CALL
                                                                 LBPP
    261 001006
262 001012
         BBIBBB
                  012746
                                                                 #Q$CLR,-(SP)
                                                       MOV
                                                       CALL
                                                                 PPCR
    263
    264 001016
265 001024
                  066767
                           000000G · 000000G
                                                       ADD
                                                                 INCVAL, MSTR2
                                                                                             :BUMP - ADDRESS
         001024
                  000742
                                                       BR
                                                                 2$
    266
    267
                                                       PROMPT ONCE . THEN . FILL . MEMORY
    268
         001026
    269
                                              5$:
                                                       CALL
                                                                PDATA
                                                                                            :PROMPT
    270
         001032
                   103401
                                                       BCS.
                                                                                         END OF MEMORY
NO (CR) RESPONSE CONTINUE
YALUE FOR OCL POINTER
                                                                 6$
    271
         001034
                  102006
                                                       BVC
                                                                 7$
    272
         001036
                  012746
                                              6$:
                                                       MOV.
                                                                 #077777,-(SP)
    273
274
275
         001042
                                                       CALL
                                                                 STOP
                                                                                             :LOAD - QCL - POINTER
         001046
                  000167
                                                       JMP .
                                                                1.04%
    276
         001052
                  216746
                           имимими
                                              7$:
                                                       MOV:
                                                                 MSTR2,-(SP)
                                                                                             :LOAD ADDR INTO QCL POINTER
         001056
                                                       CALL
                                                                 STOP
    278 001062
                  016746
                                                       MOV.
                                                                 CODE,-(SP)
                                                                                             : SELECT - MEMORY
    279 001066
                                                                                            WRITE SELECTION TO CONTROL REG
SEND DATA WORD TO FAL MEMORY
                                                       CALL
                                                                 PPCR
    280
        001072
                  016746
                           000000G
                                                       MOV.
                                                                 DATA1,-(SP)
    281
        001076
                                                       CALL
MOV-
                                                                 LBPP
    282-881182
                  312746
                           000040
                                                                                                                March 19 19 19
                                                                 #0$CLR,-(SP)
                                                                                             :CLEAR PPS ::
    283 001106
                                                       CALL
                                                                PPCR
    285
        001112 066767
                           aggagg aggagg Approved For Release 2005/07/11 CIA-RDP85-00514R00020002000159
```

	Approv	ed For R	elease 2	:005/07/13CIA-RDP85-005	14R000200020001-3
101751			CMP · BLOS ·	MSTR2,MEND 7\$	*HAS-UPPER MEMORY-LIMIT-BEEN-REACHED- *NO. CONTINUE- *LOOP-ON- *YES. CONTINUE- *YALUE-FOR QCL-POINTER- *LOAD-QCL-POINTER- *REINITIALIZE-ADDRESS-
	000000G · 000000G ·		BIT	#LOOP,BASE	;LOOP·ON·
001006	077777			8年 +のフフフファ - (SP)	YES, CONTINUE.
				STOP	* AUTOE LOK OFF LATINIES
000167	000604		M /	LD4X	22012 002 10111121
016767	000000G-000000G-	8\$:	MOV.	MSTRT, MSTR2	:REINITIALIZE ADDRESS
000733			BK	(\$	
		;			
		;	LOAD - Qt	LB·REFERENCE·PAGE·	
			•		
		indop:			
016746	000000G	LD-FORK.	MOV.	LHHIGH(SP)	:SUPPLY-UPPER-MEMORY LIMIT.
			MOV.	LHLOW,−(SP)	;LOWER-LIMIT-
107000				BUFSET.	PREPARE FOR LOAD
103002	000552			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 	OUK, CONTINUE.
200101		;			
		1\$:	BIT	#RP.BASE	:REPEAT-PROMPT-
001436		24.	BEQ.	5\$:NO. ONCE:ONLY:
103401		∠⊅:	UHLL BCS	TNH 18 ·	:KEHD:DHIA FRUM:CUMMAND:LINE:
			BVC ·	4 \$:NO-KCR> RESPONSE, CONTINUE.
012746	000013	3\$:	MOV.	#Q\$QHLT,-(SP)	#HALT-CODE
	000517		- 1 1 has been	11011	
000167	000516	:	JMP.		
	000053	4 \$:	MOV.	#Q\$QLA,-(SP)	:ADDRESS:SELECT:FOR:QLB:PAGE:
				PPCR	:SEND · TO · PP · CONTROL · REG ·
016746	0000000			MSTR2;=(SP)	; ACTUAL: ADDRESS: ; SEND: TO: PP:
012746	000001		MOV.		
			CALL	porp	
016746	000000G·			DATA1(SP)	DATA WORD FOR MEMORY
		;	OHEE.	LUFF	יסבויטי אווא וטידרטי. אוואעיעויט אוואעיעויס אַ
			ADD:	INCVAL,MSTR2	BUMP ADDRESS
000742			BR	2\$	REPEAT
			DDOMDT		
		;	TRUINT		and the state of t
		5\$:	CALL:	PDATA:	:PROMPT ' ' ' ' ' ' ' '
. 103401		٠		6 \$:END OF MEMORY
	000017	cæ.		7\$ #0#0U T . (CD)	:NO. <cr> RESPONSE, CONTINUE.</cr>
v1274b	ນບປປ13	ο ⊅ :		#W#WHE1; = (5F)	;HALT-CODE
000167	000422		JMP.	LD4X	
		1			
	ий0053	7 \$:		#U\$QLA,-(SP)	ADDRESS SELECT FOR BLATAGES SEND TO PERMITTED RES ACTUAL ADDRESS
016746	000000G		MOV.	MSTR2,-(SP)	: ACTUAL ADDRESS:
			CALL		#SEND+TU+PP+
	000001		MOV. CALL:	#Q\$QLR,~(SP) PPCR	:SELECT-QLB-REF-MEMORY-
	026767 101751 332767 001006 012746 000167 016767 000733 016746 103002 300167 001436 103401 102006 012746 016746 016746 016746 016746 016746 016746 016746 016746 016746 016746	826767 800000G 000000G 001000G 001000G 001000G 001000G 001000G 0010000G 0010000G 0010000G 0010000G 0010000G 001000G 001000G 0010000G 001000G	0267677 000000000000000000000000000000000000	BECOMPOSITION BIT BIT BECOMPOSITION BIT BIT BECOMPOSITION BIT BIT BIT BECOMPOSITION BIT BIT BIT BECOMPOSITION BIT BIT BIT BIT BECOMPOSITION BIT BIT	101751 332767 601006 6000006 6000006 8 1

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100
PPLD---- MACRO M1110 27-MAR-80 15:23 PAGE 5-6
                                       Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
     343 001366 016746 000000G····
                                                         MOV.
                                                                   DATA1.-(SP)
                                                                                               :DATA·WORD FOR·MEMORY:
:SEND·DATA TO·PPS:
     344 001372
                                                         CALL
                                                                   LBPP
     345
                   066767
     346 001376
                                                                   INCVAL, MSTR2
                                                                                               #ADVANCE ADDRESS #HAS UPPER MEMORY LIMIT BEEN REACHED #NO. CONTINUE
                            000000G - 000000G -
     347
         001404
                   926767
                                                         CMP
                            000000G · 000000G
                                                                   MSTR2, MEND
     348
                   101751
         001412
                                                         BLOS
                                                                   7$
     349 001414
                   032767
                                                                   #LOOP,BASE
                            000000G-000000G
                                                         BIT.
                                                                                               :LOOP ON
     350 001422
351 001424
                   001006
                                                                                               #YES, CONTINUE:
#HALT:CODE
#WRITE:TO:PPS:CONTROL:REGISTER
                                                         BNE
                                                                   8$
                            000013
                   012746
                                                         MOV.
                                                                   #û$QHLT,-(SP)
     352.001430
                                                                   PPCR
                                                         CALL
     353 001434
                   000167
                            000320
                                                         JMP
                                                                   1.049
                                                                                               REINITIALIZE ADDRÉSS
                   016767
000733
     354 001440
355 001446
                            000000G-000000G-8$:
                                                         MOV.
                                                                   MSTRT, MSTR2
                                                                                                    357
     358
                                                         LOAD . QLB . PAGES .
     359
     360
     361 001450
                                                LD400::
     362-001450
363-001454
                   012746
                            000000
                                                                   #0,-(SP)
                                                                                               ;SELECT PAGE 0
                   000405
                                                                   PGSEL -
         001456
                                                LD401::
     365 001456
                   012746
                                                                   #1,-(SP)
                                                                                               :SELECT-PAGE-1
     366
         001462
                   000402
                                                                   PGSEL -
         001464
     367
                                                LD402::
     368 001464
                   012746
                            000002
                                                                   #2,-(SP)
                                                                                               :SELECT PAGE: 2:
     369
     370
         001470
                                                PGSEL: -
                                                         CALL
                                                                                               #SELECT A OLB PAGE #
#SUPPLY UPPER MEMORY LIMIT #
#LOWER LIMIT
     371
         001474
                            000000G
                                                         MOV-
                                                                  LHHIGH,-(SP)
                                                                  LHLOW, -(SP)
BUFSET
     372 - 001500
                   016746
                            000000G
                                                         MOV
     373 001504
                                                         CALL
                                                                                               :PREPARE FOR LOAD : OK, CONTINUE
     374 001510
                   103002
                                                         BCC
                                                                   1 %
     375 001512
                   000167
                            000242
                                                         JMP
                                                                  LD4X
                                                                                               ERROR, EXIT
     376
377
         001516
                   032767
                                                                                               REPEAT PROMPT:
NO. ONCE ONLY:
READ DATA FROM COMMAND LINE:
                            000000G-000000G-1$:
                                                                   #RP.BASE
     378 001524
                   001436
                                                         BEQ.
                                                                   5$
     379 001526
                                                         CALL
                                                                  PDATA
     380 001532
                   103401
                                                         BCS.
                                                                   3$
                                                                                               : END OF MEMORY
     381 001534
382-001536
                   102006
                                                         BVC
                                                                                               :NO.<CR> RESPONSE, CONTINUE:
                                                                   4$
                   012746
                            000013
                                                         MOV.
                                                                   \#Q\$QHLT_*-(SP)
     383 001542
                                                                                               ; WRITE · TO · PPS · CONTROL · REGISTER
                                                         CALL
                                                                   PPCR
     384 001546
                   000167
                            000206
                                                                   LD4X
     385
         001552
     386
                   012746
                                                                   #Q$QLA,∽(SP)
                            000053
                                                         MOV.
                                                                                               ADDRESS SELECT FOR BLB PAGE
SEND TO PROCONTROL REG.
ACTUAL ADDRESS
     387
         001556
                                                         CALL
MOV-
                                                                   PPCR
     388
         001562
                   016746
                                                                   MSTR2,-(SP)
     389 001566
                                                         CALL
                                                                                               ;SEND.TO.PP.
;SELECT.QLB.REF.MEMORY.
     390 001572
                   012746
                            000054
                                                         MOV.
                                                                   #Q$QLB,-(SP)
     391
         001576
                                                         CALL
                                                                   PPCR
     392-001602-
                   016746
                            000000G
                                                         MOV.
                                                                   DATA1.-(SP)
                                                                                               :DATA-WORD FOR MEMORY:
:SEND-DATA TO-PPS-
     393 001606
                                                         CALL
                                                                   LBPP
     394
    395 001612-
                  066767
                            000000G-000000G-
                                                                   INCVAL,MSTR2
                                                         ADD.
                                                                                               :BUMP - ADDRESS -
    396 001620
                                                                                              DEBEOT.
                  000742
    398
399
                                                         PROMPT-ONCE-THEN-FILL-MEMORY-
                                       Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3
```

103401 401 001626 BCS. 6\$:END OF MEMORY BVC 102006 402-001630 7\$ 403 001632 012746 000013 MOV. 6\$: $\#Q\$QHLT_*-(SP)$ 404 001636 CALL PPCR 405 001642 000167 000112 LD4X 406 001646 407 012746 000053 7\$: MOV. #Q\$QLA,-(SP) :ADDRESS-SELECT-FOR-QLB-PAGE 001652 408 CALL #SEND TO PP CONTROL REG #ACTUAL ADDRESS #SEND TO PP PPCR. 409 001656 016746 000000G MOV. MSTR2,-(SP) 419 CALL MOV 001662 LBPP 001666 SELECT OLB MEMORY, DATA WORD FOR MEMORY SEND DATA TO PPS 012746 000054 #Q\$QL8,-(SP) 412-001672 CALL **PPCR** 413 001676 016746 000000G MOV. DATA1,-(SP) 414 001702 CALL LBPP 415 001706 001714 001722 416 417 066767 000000G-000000G-ADD: INCVAL, MSTR2 ; ADVANCE · ADDRESS · ; HAS · UPPER MEMORY · LIMIT · BEEN · REACHED · 026767 000000G 000000G CMP MSTR2, MEND 101751 BLOS 7事 419 032767 000000G-000000G #LOOP,BASE

PDATA

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:PROMPT

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5\$:

CALL

400 001622

;NO, CONTINUE ;LOOP ON ;YES, CONTINUE ;HALT CODE 001724 001732 420 001006 BNE 8\$ 421 001734 012746 000013 MOV #Q\$QHLT,-(SP) 422 · 001740 423 · 001744 PPCR CALL WRITE TO PPS CONTROL REGISTER 000010 000000G-000000G-8\$: 000167 JMP. LD4X 424 001750 016767 MOV. MSTRT, MSTR2 :REINITIALIZE ADDRESS . . 425 001756 - 7F : \$!" 426 427 428 001760 LD4X: 429 001760 012746 MOV. #Q\$CLR,-(SP) :CLEAR · PPS :WRITE · TO · CONTROL · REG 430 001764 CALL PPCR 431 001770 042767 000000G · 000000G BIC. #RP,BASE :CLEAR PROMPT FLAG 432 - 001776 CALL KILL ; KILL · AST · (IF · THERE · WAS · ONE) 002002 000167 000000G .IMP **PPSXX**

```
PPLD----MACRO-M1110 27-MAR-80 15:23 PAGE-6
                                       Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
     436
                                                                                                                                     MAN WAR
    437
                                                        LOAD · QEX · MEMORY ·
     438
     439
                                                        FIRST-WRITE-THE-FLAG-("1" = WRITE) AND THE TRANSFER-COUNT-
     440
                                                         INTO THE FIRST TWO LOCATIONS IN CP DATA MEMORY.
     441
     442
                                               LOADQX:
     443 002006
         002006
                                                        TST.
                                                                  OXCNT.
                                                                                              : ANYTHING - TO - LOAD -
     444
     445 002012
                   001507
                                                        BEQ:
                                                                  1$
                                                                                              :NO. SHUT.DOWN.AND.EXIT.
     446
                                                                                              ;WRITE-FLAG-TO-CD-ADDR-ZERO-
;FLAG-FOR-"WRITE-QEX"
         002014
     447
                                                                  CDADD.
                                                                 #1.CDDAT.
LOADCD.
QXCNT.CDDAT.
     448
         002020
                   012767
                            000001
                                     176016
                                                         MOV.
         002026
002032
     449
                                                         CALL
                                                        MOV.
                                                                                              :WRITE-GEX ADDR/DATA PAIRS-COUNT-TO-CD-ADDR-1
     450
                   016767
                            176004
                                      176004
     45 i
         002040
                                                         CALL
                                                                  LOADCD
     452
     453
         002044
                   005046
                                                         GLR
                                                                  -(SP)
                                                                                              #GLEAR - NOTHING - IN - CSR1
     454
         002046
                            176000
                                                         MOV
                                                                  #O$NCLK,+(SP)
                                                                                              :SET-NO-CLOCKS-
                   012746
     455 002052
                                                         CALL
                                                                  CSR4
     456 002056
                   005067
                                                                  QR$CR2
                            176422
                                                                                              :SET LOAD MODE.
     457
                                                        SELECT-MEMORY-TO-BE-LOADED-(WINDOW-OR-LOCATION).
START-THE-MICROCODE-THAT-DOES-THE-LOADING-OF-THE-QEX.
     458
     459
     460
                                                                                             ; SELECT WINDOW OR LOCATION MEMORY
         002062
     461
                   016746
     462
         ·002066
002072 ·
                                                         CALL
                                                                  PPCR
                                                                  #1760,-(SP)
                                                                                              :START-CP-MICROCODE-AT-X13F01
                                                         MOV:
     463
                   012746
                            001760
         002076
     464
                                                         CALL
          002102
                   005046
                                                         CLR:
                                                                  -(SP)
                                                                                              :RESET BR INHIBIT
                                                                  CPCR
     466
         002104
                                                         CALL
                                                                  #377,-(SP)
                                                                                              #SET-MRP-MICRO-ADDRESS-=-X*FF* (JUMP-SELF)
                                                         MOV.
         002110
002114
                   012746
                            000377
     467
     468
                                                         CALL
                                                                  SEQMM-
          002120
                                                         CLR-
                                                                  -(SP)
                                                                                              :RESET BR INHIBIT
     470
         002122
                                                         CALL
                                                                  MRPCR
                                                                  471 002126
472 002134
473 002142
                   012767
012767
012746
                            001000
                                      176422
                                                         MOV.
                                                         MOV
                            022000
                                      176422
                            000360
                                                         VOM
                   052716
052716
     474 002146
                             001001
                                                         BIS-
         002152
002156
                                                                  #Q$NCLK,(SP)
-(SP)
                                                                                              :CLEAR ALL NO+CLOCKS
:SET NOTHING
     425
                             176000
                                                         BIS
                   005046
                                                         CLR -
     476
     477
          002160
     478
                                                         WAIT-FOR-INTERRUPT-FROM-CP-
USE-DMA-INTERRUPT-(SEE CP-MICROCODE-FOR-QEX)
     479
     480
     481
     482-002164
                                                         WTSE$S . #EFN.3
     483
     484 002176
                                                         CLEF$S: #EFN.3
     485
                                                         RE-ARM-INTERRUPTS
     486
                                                                                                         --
                   812767
812767
                                                         MOV.
                                                                  #<Q$SM+Q$CHB>,QR$CR2 ;CLEAR,INTERRUPT.(USE,HiT-BUFFER,INT)
#<Q$SM+Q$REBK>,QR$CR2 **RE-ARM
     488 002210
                             100400
                                      176422
                                                         MOV.
         002216
002224
                                      176422
     489
                             101000
                                                                                                                                 20
                   012767
                                                                   #<Q$SM+Q$ENBK+Q$ENOP>,QR$CR2:;ENABLE
     490
                             160000
                                      176422
```

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1\$:

492-002232- 005046 493-002234 012746 176000 494-002240 495-002244 005067 176422 496-002250 CLR· -(SP)
MOV· #Q\$NCLK;-(SP)
CALL· CSR1
CLR· QR\$CR2·
RETURN-

#GLEAR NOTHING IN CSR1 #SET NO+CLOCKS

SET LOAD MODE.

```
PPLD----MACRO-M1110 27-MAR-80 15:23 PAGE 7
Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
     498
     499
     500
                                                               LOAD · CP · DATA MEMORY
     501
     502
503
         882252
                                                    LOADCD:
          002252
                                                                         #QsLDCD,QR$LBR ;MOVE-ATTN CUDE-10-L0D-00
#<Q$ATTN+Q$SM+Q$ENOP>,QR$CR2-;SET ATTN CODE-READY
QR$CR2,R1 ;READ CSR2
                     012767
                               000003
                                          176424
                                                               MOV
                                                                                                         ; MOVE - ATTN CODE - TO - LOD - BUS - REG
     505 002260
                     012767
                               120100
                                          176422
                                                               MOV
         002266
002272
                    016701
032701
     506
                                                    1$:
                                                               MOV
                               000100
                                                                         #Q$ATTH,R1
                                                               BIT
                                                                                                        ATTH CLEAR : : NO. READ AGAIN :
     508
          002276
                     001373
                                                                         1$
                                                                                                                                                    770 (74372)
     589
     510
          002300
                     016767
                               175534
                                          176424
                                                               MOV
                                                                         CDADD,QR$LBR: ;CD:MEMORY START:ADDRESS #KQ$CCCP+Q$SM+Q$ENOP>,QR$CR2:;SET:CC:TO:CP:
     511 002306
                    012767
                               120040
                                          176422
                                                               MOV
          002314
                    016701
                               176422
                                                    2$:
                                                               MOV.
                                                                         QR$CR2,R1
                                                                                                        :READ CSR2
     513
         002320
                     032701
                                                                                                        ; IS · CC · TO · CP · CLEAR ·
; NO » READ · AGAIN ·
                               000040
                                                               BIT
                                                                         #Q$CCCP,R1
     514
          002324
                    001373
                                                               BNF
                                                                         2$
     515
     516
          002326
                    012767
                               000001
                                          176424
                                                                         #1.QR$LBR: :TRANSFER:COUNT = 1 WORD
#<Q$CCCP+Q$SM+Q$ENOP>,QR$CR2:SET:CC:TO:CP:
QR$CR2.R1 :READ CSR2
#0$CCCP,R1 :IS:CC:TO:CP:CLEAR()::;
                                                               MOV
                                                                         #1,0R$LBR
          002334
                    012767
                               120040
                                         176422
                                                               MOV
     518 002342
                    016701
                               176422
                                                    3$:
                                                               MOV.
     519
         002346
                    032701
                               000040
                                                               BIT.
     520 002352
                                                                                                        :NO. READ AGAIN
                    001373
                                                               BHE
                                                                         3$
     521
     522
         002354
                    012767
                               000044'
                                         176424
                                                                         #CDDAT.QR$LBR: ;CC:MEMORY DATA:BUFFER: #<Q$CCCP+Q$SM+Q$ENOP>,QR$CR2:;SET:CC:TO:CP:
                                                               MOV.
     523 002362 012767
                               120040 176422
                                                              MOV:
    524
525
526
527
                                                               WAIT-FOR-INTERRUPT-FROM-CP.
         002370
                                                              WTSE$S: #EFN.3
     528
    529 002402
530
                                                              CLEF$S: #EFN.3
    531
532
                                                              RE-ARM. INTERRUPTS
     533 002414
                    995267
                               175429
                                                               INC
                                                                                                        :BUMP · CP · DATA · MEMORY ADDRESS
    534 002420
                    012767
                               100400
                                                                                                        CLEAR INTERRUPT (USE HIT BUEFER INT)
                                         176422
                                                               MOV
                                                                         #<Q$SM+Q$CHB>,QR$CR2.
    535 002426
536 002434
                    012767
                               101000
                                          176422
                                                              MOV.
                                                                         #<Q$SM+Q$REBK>,QR$CR2
                                                                                                         :RE-ARM
                    012767
                               160000
                                         176422
                                                               MOV.
                                                                         #KQ$SM+Q$ENBK+Q$ENOP>,QR$CR2:;ENABTE
    537 002442
                                                              RETURN
    538
    539
                    000001
                                                               .END
```

" "

```
1-3
                                                                                               PPLD----MARO M1110 27-MAR-80 15:23 PAGE-7-1
SYMBOL TA
                                         Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
ALUCKE = : 040000
                              BYTE4 = 999994
                                                             BYTE91=-000133
                                                                                                     881464RG
                                                                                                                    002-Q$CPCC=-000010
ALUOE: =: 004000
A01 =: 010000
BASE: =: ********* GK:
                              BYTE40= 000050
                                                             BYTE92=-000134
                                                                                                                    002 · Q$CP2 · = · 000260
002 · Q$CSC · = · 010000
                                                                                           LD4TBL 000000RG
                               BYTE41=-000051
                                                             BYTE93=-000135
                                                                                           1 D4X
                                                                                                     001760R
                              BYTE 42 = - 000052
                                                             BYTE94= 000136
                                                                                           LHHIGH= · ***** GX-
                                                                                                                         Q$CSEL = ⋅ NAN36A
BINUD := : ****** CK
                              BYTE43 = · 000053
                                                             BYTE95 = . 000137
                                                                                           LHLOW∙=⋅****** GX-
                                                                                                                         Q$CSET= 0000002
BITVAL = 000000
BIT0 = 000001
BIT1 = 000002
                              BYTE44= 000054
                                                             BYTE96= 000140
                                                                                           LOADCD 002252R
                                                                                                                    002 Q$CSP = 020000
                              BYTE45= 0000055
BYTE46= 000056
                                                             BYTE97 = . 000141
                                                                                           LOADOX: 002006R
                                                                                                                    002.Q$DMA.=.000001
                                                             BYTE98= 000142
                                                                                           LOC:EN= 000100
                                                                                                                         Q$ENBK = . 040000
BIT10 = 002000
                              BYTE47 = . 000057
                                                                                                                         Q$ENOP= 020000
Q$FAL = 004000
                                                             BYTE99=-000143
                                                                                           LOC:WA= 040000
BIT11 = 004000
                              BYTE48 = . 000060
                                                             BYTVAL= 000144
                                                                                           LOC.WB= 100000
                                                                                           BIT12---010000
BIT13 --020000
BIT14 --040000
                              BYTE49= 000061
                                                             CBKALL = . 001000
                                                                                                                                = · 000045
= · 000044
                                                                                                                          Q$FC
                              BYTE5 - 000005
                                                             CBKCLK = · 000400
                                                                                                                          0$F0
                              BYTE50= 000062
                                                                       000040R
                                                                                      002 · MAREN2 = · 004000
                                                                                                                          0.SEP
                                                                                                                                = 0000046
                                                             CDDAT 000044h
CNOBRE = 100000
BIT15 = 100000
BIT2 = 000004
                              BYTE51= 000063
                                                                       000044R
                                                                                      002 · MARLOD = · 010000
                                                                                                                          Q$HBF - = - 000002
                               BYTE52= 000064
                                                                                                                          Q$ICP - 000006
                                                                                           MAROUT= . 000002
       = 000010
                                                                                      MAR.LO= 002000
MAR.LO= 002000
MAR.QU= 000040
MBKALL = 001000
MBKCLK= 000400
MEND = ******* GX
BIT3
                              BYTE53= 000065
BYTE54= 000066
                                                             CODE -
                                                                       000046R
                                                                                                                          Q$IHB.=.000003
       = 000020
                                                             CPCCEN= 010000
CPCR = ******** GX
                                                                                                                         O⊈THRE≔ AAAAA2
BIT5
       = 000040
                              BYTE55= 000067
                                                                                                                       $ Q$IMRP= 000007
       = · 000100
= · 000200
BIT6
                              BYTE56= 000070
                                                             CPREAD = 040000
                                                                                                                         Q$LBD = 001000
BIT7
                              BYTE57= 0000071
                                                             CPWRTE = . 020000
                                                                                                                         ·Q$LBDP=-001001
                              BYTE58= 000072
BITS
       = 000400
                                                             CSADPD = 000004
                                                                                           MMADRD= 000100
                                                                                                                         Q$LBP - - 000001
       = 001000
                              BYTE59= 000073
                                                             CSEQCI=-100000
                                                                                           MMLEFT= : 000002
                                                                                                                          Q$LDCD= 000003
                              BYTE6 = 000006
                                                             CSOE - - 000040
CSR1 - *********** GX
MMOE - - 000004
                                                                                                                          Q$LDMD= 000004
BYTE1 = 0000001
                              BYTE60 = . 000074
BYTE61 = . 000075
                                                                                           MMURTE = . 000010
                                                                                                                         Q$LDPP= 002000
Q$LHP = 010000
                                                             CSWRTE = 000100
DATA1 = ********* GX
                                                                                           MNOBRE = 100000
BYTE10= . 000012
                              BYTE62= 000076
                                                                                           MREN1 = 000001
MREN2 = 020000
                                                                                                                          Q$MHC - = -
                                                                                                                                    140000
BYTE11= 000013
                              BYTE63=.000077
                                                             DBR.RD= 000001
                                                                                                                         Q$MR = 000052
Q$MRP = 000040
BYTE12= 000014
                              BYTE64= 000100
                                                             DB$CPP=-001457
                                                                                           MRPCR = ********** ,GX ---
BYTE13= 0000015
                              BYTE65= 000101
                                                             DB$SPT=.000026
DB$TPC=.000023
                                                                                           MSTRT - - ***** GX
                                                                                                                          Q$MRP2=.000240
BYTE14= 000016
                              BYTE66= 000102
                                                                                           MSTR2 - ∰ жұжжжың GX
MSYN - 19 0000401
                                                                                                                          0$MSC - = - 040000
BYTE15= 000017
                              BYTE67=-000103
                                                             DISPGS = 100000
                                                                                                                         Q$MSET= 000004
Q$MSP = 100000
BYTE16= 000020
                              BYTE68= 000104
                                                             DMAAUR = - 000005
                                                                                                  = 000144
BYTE17= 000021
                              BYTE69= 000105
                                                             DMARRD= · 000003
                                                                                           PACK-
                                                                                                   = · ****** GX
                                                                                                                          Q$NCLK= 176000
BYTE18 - . 000022
                              BYTE7 = 0000007
                                                             DMARWR = . 000004
                                                                                           PDATA = ******** GX**
PGSEL ** 001470R*
                                                                                                                                 = 000100
                                                                                                                         Q$PP
BYTE19= 000023
                              BYTE70= 000106
                                                                                                                    002 · Q$PPSW= · 000320
0$PP2 · = · 000300
                                                             EFN:3 = ******* GX
BYTE2 - - 000002
                              BYTE71= 000107
                                                                                                   = 000010
                                                             ENBR - - 010000
                                                                                           PLB.
BYTE20= 000024
                               BYTE7.2= 000110
                                                             ERR11 = ******** GX
                                                                                           PLC.
                                                                                                   = .000020
                                                                                                                          Q$QHLT= 000013
BYTE21= 000025
                              BYTE73=-000111
                                                                    = ***** GX
                                                             ERR4
                                                                                           PLD.
                                                                                                   - 0000030
                                                                                                                         0$QL = .000043
0$QLA · = .000053
BYTE22= 000026
                              BYTE74= 000112
                                                                    = · ****** GX
                                                             ERR5
                                                                                           PLRWR - = - 000200
BYTE23= 0000027
                              BYTE75= 000113
                                                                    = · ****** GX
                                                             ERR7
                                                                                           PLR.EN= 000200
                                                                                                                          Q$QLB*= 000054
BYTE24= 0000030
                              BYTE76= 000114
                                                             FAHIGH= ****** GX
                                                                                      PPCR = ******* GX
002 <u>PPSXX *</u> ****** GX
QEX 4 \ 000340R
                                                                                                                          Q$QLR. = .000001
BYTE25= 000031
                              BYTE77=:000115
                                                             FAL.
                                                                      000700R
                                                                                                                          Q$QW = 000042
BYTE26= 000032
                              BYTE78=-000116
                                                             FALOW: = : *c*c*c*c*c* GX
                                                                                                                    002 Q$RDCD= 000005
                                                             FIND: = ******* GX
HANG: = ******* GX
BYTE27=-000033
                              BYTE79=.000117
BYTE8 =.000010
                                                                                           QR$CR1= 176420
                                                                                                                          Q$RDMD= . 000006
BYTE28= 0000034
                                                                                           QR$CR2= 176422
                                                                                                                          Q$REBK=.001000
BYTE29= .000035
                              BYTE80= 000120
                                                             INCVAL = · ********* GX
                                                                                                                    Q$RNC - = 006000
002 · Q$RSC - = 004000
                                                                                           QR$LBR= 176424
BYTE3 = 000003
                              BYTE81= 000121
                                                             KILL = ******** GX
                                                                                           QXCNT: 000042R
BYTE30= 000036
                              BYTE82=:000122
                                                             LBPP.
                                                                    = · *********** GX
                                                                                           QXHIGH= ****** GX
                                                                                                                          Q$RSET=:000010
BYTE31= 000037
                              BYTE83=-000123
                                                                                                                          Q$SM = 100000
Q$SP = 000120
                                                             LD4
                                                                       000050RG
                                                                                      002 · 0XL0W · = · ****** GX ·
BYTE32= 000040
                               BYTE84= 000124
                                                             LD4FC
                                                                                      002.0$ATTN=.000100
003.0$000
0$CCCP= 000040
                                                                       000672RG
                                                                                                                         .Q$SP2 = 000340
RGQ.EN= 000200
BYTE33=:000041
                              BYTE85= 000125
                                                             LD4FP
                                                                       000662RG
BYTE34= 000042
                              BYTE86= 000126
                                                             LD4LH -=
                                                                       000010 G
BYTE35= 000043
                              BYTE87 = . 000127
                                                             LD40L
                                                                       000332RG
                                                                                      002 · Q$CHB · = · 909499
                                                                                                                          RGQ:VA=-020000
BYTE36 = 000044
BYTE37 = 000045
                              BYTE88= 000130
                                                             LD40R
                                                                                      002 · Q$CHRL = · 000200
                                                                       001164RG
                                                                                                                                 =·*****
                              BYTE89= 000131
                                                                                      002 · Q$CLR · = · 000040
                                                             LD40M
                                                                       000322RG
                                                                                                                          RTNPT -= - ******
BYTE38= 000046
                              BYTE9 = 000011
                                         300011 LD400 001450RG 002.0$CNC = 030000 SCHN = жжжжж
300132 LD401 001456RG 002.0$CP = 000060
Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3 SELPG = жжжжж
                                                             LD400
                                                                       001450RG
                                                                                      002 · Q$CNC · = · 030000
                                                                                                                                =·****** GX
BYTE39= 000047
                              BYTE90= 000132
```

```
PPLD----MACRO-M1110 27-MAR-80 15:23 PAGE-7-2.
SYMBOL-TABLE- Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
SEQCS- = · ****** GX-
                               T$DRD - = - 000004
                                                              WORD11= 000026
                                                                                            WORD42= 000124
SEQMM = ****** GX
                                                                                                                           WORD72=-000220
                               T$EMEM= 010000
                                                             WORD12=-000030
WORD13=-000032
                                                                                            WORD43= 000126
                                                                                                                           WORD73= 000222
EQ.CI= 000010
                               T$F$AA=-000000
                                                                                            WORD44=-000130
                                                                                                                           WORD74=-000224
STOP.
      =·****** GX
                               T$FSAB=:000004
                                                              WORD14= 000034
                                                                                            MORD45 = - 000132
                                                                                                                           WORD75= 000226
S$CLR - = - 000000
                               T$FSAC= 000014
                                                              WORD15= 000036
                                                                                            WORD46= 000134
                                                                                                                           WORD76= 000230
S$LA - - 000001
                               T$FSB2=-000010
                                                             WORD16=-000040
WORD17=-000042
                                                                                            WORD47= 000136
                                                                                                                           WORD77= 000232
      = 0000005
S$QB
                               T$IB: =:000026
                                                                                            WORD48= 000140
                                                                                                                           WORD78= 000234
       = 000006
                               T$IBAR= 000024
                                                              WORD18= 000044
                                                                                            WORD49= 000142
WORD5 = 000012
                                                                                                                           WORD79= 000236
S$QX. = 0000004
                               T$IBE - = - 020000
                                                              WORD19= 000046
                                                                                                                          WORDY = 000236

WORDS = 0000240

WORDS1 = 000242

WORDS1 = 000244
S$SR. = 0000007
                               T$IBF - = -040000
                                                             WORD2 = 000004
WORD20 = 000050
                                                                                            WORD50= 000144
3$S1
       = - 000010
                               T$ICD - = -000040
                                                                                            WORD51= 000146
5$82
       = 000014
                                                                                            WORD52= 000150
WORD53= 000150
                               T$MODE = . 004000
                                                              WORD21= 000052
TD$CTR=-176370
                               T$0B - - 000036
                                                              WORD22= 000054
                                                                                                                           WORD83= 000246
WORD84≅ 000250
TD$CTW=-176360
                               T$0BE - = - 004000
                                                              WORD23= 000056
                                                                                            WORD54= 000154
TD$INL= 004000
                               T$0BF - = 010000
                                                             WORD24= 000060
WORD25= 000062
                                                                                            WORD55= 000156
                                                                                                                           WORD85= 000252
WORD86= 000254
TD$MEM= 000270
                               T$0BRA= .000034
T$0BWA= .000032
                                                                                            WORD56=-000160
TD$0AR= 176344
                                                              WORD26= 000064
                                                                                            WORD57= 000162
WORD58= 000164
                                                                                                                           WORD87= 000256
TD$OTR=:176346
                               T$0UTA=-100000
                                                             WORD27= 000066
WORD28= 000070
                                                                                                                           WORD88= 000260
TD$QRD= 000274
TD$SW = 176376
                               T$RBDO= 000200
                                                                                                                           WORD89= 000262
WORD9 = 000022
                                                                                            WORD59= 000166
                               T$RNB - 000040
T$RSET - 040000
                                                              WORD29= 000072
                                                                                            WORD6 = 000014
YD$TAR=:176372
                                                             WORD3 = 000006
                                                                                            WORD60= 000170
                                                                                                                           WORD90= 000264
TD$TAW= 176362
                               T$SC.
                                      = 0000022
                                                             WORD30=-000074
                                                                                            WORD61= 000172
                                                                                                                           WORD91= 000266
WORD92= 000270
TD$TDR= 176374
                               T$SCLK= 020000
                                                             WORD31=-000076
                                                                                            WORD62= 000174
TD$TDW= 176364
                               T$SEG1=-000000
T$SEG2=-000001
                                                             WORD32 - 000100
T$AD - - 000020
T$BA - - 000002
                                                                                            WORD63= 000176
                                                                                                                           WORD93 = . 000272
                                                             WORD33 = . 000102
                                                                                            MORD64=-000200
                                                                                                                           WORD94= 000274
                               T$SEG3=-000002
                                                             WORD34=-000104
                                                                                            WORD65= 000202
                                                                                                                           WORD95= 000276
WORD96= 000300
T$8D - 000001
                               T$SO· = 000001
T$UBUS= 100000
T$1CLK= 000400
                                                             WORD35= 000106
                                                                                            WORD66= 000204
WORD67= 000206
T$BSO -- 100000
                                                              WORD36= 000110
                                                                                                                           WORD97=-000302
T$BT: =:000020
                                                             WORD37=-000112
                                                                                            WORD68= 000210
                                                                                                                           WORD98= 000304
T$BTAR = . 000030
                                                             WORD38=-000114
WORD39=-000116
                               T$8BEN= 000020
                                                                                            WORD69=-000212
                                                                                                                           WORD99=-000306
T$BTD - = - AA2AAA
                              UBD: IN= 000020
                                                                                            WORD7 = 000016
                                                                                                                           WRDVAL = . 000310
T$CD - - 000100
                              WORD9 = 000000
WORD1 = 000002
                                                             WORD4 = 000010
                                                                                            WORD70= 000214
                                                                                                                           XTREAD= 001000
T$CLK - = - 002000
                                                             WORD40 = . 000120
                                                                                            WORD71= 000216
                                                                                                                           XTWRTE = . 000400
T$DISK= 000200
                              WORD10= 000024
                                                             WORD41= 000122
. ABS.
          999999
                        рор
          000000
                        001
PPLD
          002444
                        002
ERRORS DETECTED:
                      0
VIRTUAL MEMORY USED: 3729 WORDS ( 15 PAGES)
DYNAMIC MEMORY: 4916 WORDS ( 18 PAGES)
ELAPSED TIME: 00:00:56
VIRTUAL MEMORY USED:
::PLD,PPLD/-SP=[20,1]IM,[20,1]PPLD.
```

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Carried St.

```
MACRO : M4110 27-MAR-80 15:24 PAGE 5
Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
PPPR-
                                                                                                                                                  .#ITLE--RPPR
.PSECT- PPPR
                       000000
                  4
                                                                                                                                                 HARDWARE QUERY RESOLVER 'MANUAL' DEBUGGING AIDS PIPELINED PROCESSORS: TEST-ROUTINES
                 8
                                                                                                                                                  COMMANDS:
                                                                                                                                                                        PRINT PPS MEMORY CONTENTS
               10
               1 i
                                                                                                                                                 ONCE A COMMAND HAS BBEN EXECUTED (OR AN ERROR ENCOUNTERED) THIS MODULE RETURNS CONTROL TO THE MODULE PPS AT LOCATION
                                                                                                                                                  'PPSXX'.
               14
15
                                                                                                                                       18
                                                                                                                                                 NOTE:
               19
                                                                                                                                                THE COMMANDS TO PRINT OEX MEMORIES CANNOT BE USED UNLESS MRP MICROPROGRAM MEMORY AND CP CONTROL STORE HAVE BEEN LOADED VIA THE 'LOADER' PROGRAM, QEX PRINTING MAKES USE OF CP DATA MEMORY - THE PREVIOUS CONTENTS OF THAT MEMORY ARE DESTROYED.
               20
              21
22
               24
25
26
                                                                                                                              ****************
                                                                                                                                                                                                                                                              27
               28
29
30
                                                                                                                                                  .MCALL WTSE$S.CLEF$S
                                                                                                                                                 TABLE OF VALID PPS MEMORY MNEMONICS AND ADDRESSES OF
              32
33
                                                                                                                                                 ASSOCIATED ROUTINES
                       попород
               34
                                                                                                                         PR4TBL::
               35
                       000000
                                                         121
                                                                                 127
                                                                                                                                                 .ASCII-
                                                                                                                                                                         /QW/
                                                                                                                                                                                                                                                  :OEX MEMOSA
                        000002
                                                0003424
                                                                                                                                                  .WORD
                                                                                                                                                                        PR40W
               37
                        000004
                                                          121
                                                                                 114
                                                                                                                                                  .ASCII:
                                                                                                                                                                          /QL/
                                                                                                                                                                                                                                                  ;QEX-LOCATION-MEMORY
                       000006
000010
                                                0003524
                                                                                                                                                                         PR40L
                                                                                                                                                  . WORD:
               39
                                                         186
                                                                                 120
                                                                                                                                                  .ASCII
                                                                                                                                                                         /FP/
                                                                                                                                                                                                                                                  :FAL POINTER MEMORY
               46
                        000012
                                                301356
                                                                                                                                                  .WORD
              41
                       000014
                                                                                 103
                                                                                                                                                  .ASCII:
                                                                                                                                                                          ZECZ
                                                                                                                                                                                                                                                  :FAL . COUNTER . MEMORY
              42
                       -000016
                                                0013661
                                                                                                                                                                         PR4FC
                                                                                                                                                  . MORD
              43
                       000020
                                                         186
                                                                                 117
                                                                                                                                                  .ASCII
                                                                                                                                                                          /F0/
                                                                                                                                                                                                                                                  :FAL · OVERFLOW · BITS ~
               44
                        000022
                                                001376
                                                                                                                                                  .WORD
.ASCII
                                                                                                                                                                        PR4F0
              45
                        000024
                                                                                                                                                                         /0R/
                                                                                                                                                                                                                                                 :QLB-REFERENCE-PAGE
              46
                       000026
                                                001554
                                                                                                                                                  .WORD
                                                                                                                                                                        PR40R
                        000030
                                                         121
                                                                                060
                                                                                                                                                  .ASCII
                                                                                                                                                                         /00/
                                                                                                                                                                                                                                                 :QLB-PAGE-0
               48
                        000032
                                                                                                                                                  .WORD
                                                                                                                                                                        PR400
                                               121
001752
              49
                       000034
                                                                                061
                                                                                                                                                  .ASCII.
                                                                                                                                                                         2012
                                                                                                                                                                                                                                                 #QLB-PAGE-1
                        000036
                                                                                                                                                  .WORD
                                                                                                                                                                        PR401
              51
52
                       000040
                                                                                062
                                                                                                                                                  .ASCII.
                                                                                                                                                                         /02/
                                                                                                                                                                                                                                                 :QLB-PAGE-2-
                       000042
                                               001760
                                                                                                                                                                        PR402
                                                                                                                                                 .WORD
             53
54
55
                                               000044
                                                                                                                        PR4LN
                                                                                                                                                                         <.-PR4TBL>
                                                                                                                                                                                                                                                   THE RESERVE OF THE PARTY OF THE
             56 000044
                                              ававав
                                                                                                  CDADD: WORD Ø : ADDR FOR PRINTING FROM CP DATA MEMORY
DATA FOR TRANSFER TO CP DATA MEMORY
Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3
                      000046
                                              000000
```

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           O M1110 27-MAR-80 15:24 PAGE 5-1
Approved For Release 2005/07/19 CIA-RDP85-00514R000200020001-3
      000050
                 000000
                                                     QXCNT:
                                                                                                               :NUMBER:OF QEX ADDR/DATA:PAIRS
:CODE:FOR:MEMORY:SELECTION:
                                                                 .unen.
 59
     000052 000000
                                                     CODE:
                                                                 .WORD
                                                                            Ø
 60
 61
62
                                                                 PRINT
 63
64
65
                                                                PERFORM THIRD LEVEL PARSING EG. IN THE COMMAND: PP>PR OW 0
 66
                                                                 PARSE THE 10W1
 67
 68
      000054
                                                     PPPR4::
 70
71
      000054
                                                                 CALL
                                                                            FIND
                                                                                                               ;LOCATE MEMORY MNEMONIC IN COMMAND LINE
      000060
                  103004
                                                                 BCC.
                                                                             1$
                                                                                                               OK, CONTINUE
MISSING OPERAND
      000062
                                                                 CALL
                                                                            ERR4
                  000167
      000066
                                                                 JMP.
                                                                            PR4X
  74
                                                                                                               NUMBER OF TABLE ENTRIES POINT TO TABLE MATCH AGAINST COMMAND LINE MATCH WAS MADE.
      000072
  75
                 012700
                             999944
                                                                 MOV.
                                                                             #PR4LN,R0
      000076
                 012702
                             000000
                                                                 MOV.
                                                                             #PR4TBL, R2
      000102
                                                                CALL
BCC -
                                                                            SCAN
                  103004
  78
      000106
                                                                            24
  79
      000110
                                                                 CALL
                                                                            ERR7
                                                                                                                ; "INVALID - MEMORY - MNEMONIC!
      000114
                 000167 002040
                                                                            PR4X
 81
 82
                                                                SAVE POINTER TO ROUTINE ASSOCIATED WITH THE MEMORY MNEMONIC, SCAN THE REMAINDER OF THE COMMAND LINE FOR CONTROL INFORMATION:
 83
 84
 85
                                                                     START ADDRESS ONLY. PRINT ONE MEMORY LOCATION.
 86
                                                                     PP>PR-QW-0
 87
                                                                    START ADDRESS, LOOP INDICATOR, LOOP ON THE READING OF THIS ONE MEMORY LOCATION ONLY, PRINT THE CONTENTS ONLY
 88
                                                                     ONCE.
                                                                                                                                       90
                                                                     PP>LD-QW-0 L
 91
92
                                                                    START ADDRESS, END ADDRESS, NO LOOP, PRINT THE CONTENTS OF MEMORY BETWEEN THE START AND END ADDRESSES.
                                                                    START-ADDRESS, END-ADDRESS, LOOP-INDICATOR, READ-THE-CONTENTS-OF-MEMORY BETWEEN-THE-START-AND-END-ADDRESSES, HOWEVER, PRINT-ONLY-THE-CONTENTS-OF-MEMORY-AT-THE-START-ADDRESS.

PP>PR-QW-0 7 L
 94
 95
 96
 97
 98
99
     000120
                 010167
                             000000G
                                                                            R1.RTHPT
                                                                                                               ;SAVE POINTER ;LOCATE NON-BLANK IN COMMAND LINE ;OK, CONTINUE
     000124
100
                                                                 CALL
                                                                            FIND
101
     000130
                  103004
                                                                BCC.
                                                                            3$
102
     .000132
                                                                            ERR4
                                                                 CALL
                                                                                                                : 'MISSING OPERAND:
103
     000136
                 000167
                           .002016
                                                                 .TMP -
                                                                            PR4X
                                                                                                               :EXIT
104 000142
                                                     3$:
                                                                                                               CONVERT COMMAND LINE VALUE TO BINARY
                                                                CALL
                                                                            PACK
105 000146
                 103004
                                                                BCC.
                                                                            4$
                                                                                                                CONVERSION SUCCESSFUL
                                                                                                               : INVALID NUMERIC-VALUE
106 000150
                                                                CALL
                                                                            ERR5
107
     000154
                 000167
                             002000
108
                                                                                                              SAVE PRINT START ADDRESS
***SAVE IT TWICE
INIT END ADDRESS
109 000160
                 016767
                                                                            BINWD.MSTRT
BINWD.MSTR2
                             000000G · 000000G · 4$:
                                                                MOV.
110 000166
111 000174
                 016767
012767
                             000000G · 000000G
                                                                MOV:
                             177777
                                       000000G
                                                                MOV.
                                                                            #-1,MEND
                                          START ADDRESS HAS BEEN FOUND. SCAN FOR END ADDRESS OR LOOP INDICATOR (CONDITIONS 2, 3 ABOVE). IF THERE IS NOTHING Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
113
114
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MACRO M1110 27-MAR-80 15:24 PAGE 5-2
                                   Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
115
                                                      FURTHER-IN-THE-COMMAND LINE, CONDITION-1 IS-IN-EFFECT.
116
117
    000202
                                                                FIND
                                                                                             ;SCAN · COMMAND · LINE
    000206
000210
118
              193994
                                                      BCC:
                                                                5$
                                                                                              SOMETHING THERE
                                                      MOV
                                                                MSTRT, MEND
119
              016767
                        000000G · 000000G
                                                                                             ;SET.END.ADDR.=.START.ADDR
;JUMP.TO.RTN.
    000216
              000445
                                                                 9$
121
122:000220
                                                                                             ;LOOP: INDICATOR:
;NO, MUST-BE: UPPER: ADDRESS:
;SET-FLAG-FOR: OUTPUT CONTROL
;SET-END: ADDR: =: START-ADDR:
;HOW: TO: STOP: LOOP:
                                                      CMPB
               122711
                                                                #!L,(R1)
                        000114
                                            5$:
123
    000224
              001011
                                                      BNE
                                                                6$
124
    000226
              052767
                        000000G · 000000G
                                                                #OUT,BASE
125
    000234
              016767
                        000000G · 000000G
                                                      MOV
                                                                MSTRT, MEND
126
    000242
                                                      CALL
                                                                HANG
    000246
              000431
                                                                                              ; JUMP - TO - RTH -
                                                                9$
128
    000250
129
                                                      CALL
BCC
                                                                PACK
                                            К$:
                                                                                              ; CONVERT · UPPER · ADDRESS
    000254
130
               103004
                                                                                             :OK, CONTINUE:
:INVALID:NUMERIC:
                                                                7$
    000256
131
                                                                ERR5
                                                      CALL
132
    000262
               000167
                        001672
                                                                PR4X
                                                                                              :EXIT
133
                                                      134
135
136
137
     000266
               016767
                        000000G-000000G-7$:
                                                                BINWD, MEND
                                                                                              :SET.UP.END.ADDRESS
                                                                                              CHECK FOR LOOP INDICATOR NO LOOP TO CORRECT LOOP, INDICATOR
138
     999274
                                                      CALL
                                                                FIND
139
     000300
               103414
                                                      BCS.
                                                                9:5
140
     000302
               122711
                        000114
                                                      CMPB
                                                                #1Lx(R1)
141
     000306
               001404
                                                      BEQ
                                                                8$
                                                                                              :YES
                                                                ERR11
142
    000310
                                                      CALL
     000314
               000167
                                                                PR4X
                                                      JMP
                                                                                              : NO
                                                                #OUT,BASE
144
     000320
               052767
                        000000G.000000G.8$:
                                                      BIS
                                                                                              ;SET · OUTPUT · CONTROL
145
     000326
                                                                                              :HOW-TO-STOP-LOOP
146
                        000000G
                                                                                              :POINT.TO.ROUTINE
:JUMP.TO.ROUTINE.
     000332
               016701
                                                      MOV.
147
                                            9$:
                                                                RTNPT, R1
148
    000336
               000171
                        000000
                                                                @(R1)
149
150
151
                                                      PRINT FROM - QEX - WINDOW - MEMORY
152
                                                      PRINT FROM QEX LOCATION MEMORY
153
154
     000342
               012767
                        000042
                                  177502
                                            PR4Q₩::
                                                      MOV
                                                                #Q$QW,CODE⋅
                                                                                              :SET-MEMORY-CODE - = - WINDOW
156
     000350
               000403
157
     000352
               012767
                         000043
                                  177472
                                            PR4QL::
                                                      MOV
                                                                #Q$QL,CODE
                                                                                              :SET-CODE-=-LOCATION
158
159
     000360
               316746
                         000000G
                                                      MOV-
                                                                QXHIGH,-(SP)
                                                                                              ;SUPPLY-UPPER-MEMORY LIMIT
168
     000364
               016746
                        000000G
                                                      MOV.
                                                                QXLOW,-(SP)
BUFSET
                                                                                              ;LOWER-LIMIT
     000370
                                                                                              :PREPARE FOR LOAD
:NO ERROR
161
                                                      CALL
               103002
162
                                                      BCC -
                                                                1$
163
     000376
               000167
                        001556
                                                      JMP
                                                                PR4X
                                                                                              :ERROR
164
165
                                                      CALCULATE THE NUMBER OF WORDS TO TRANSFER MSTR2 = START ADDRESS
166
167
                                                              = · END · ADDRESS
                                                                          LOAD START ADDRESS
:LOAD END ADDRESS
:GET NUMBER OF WORDS TO PRINT
CIA-RDP85-00514R000200020001-3
168
    000402
                                                                MSTR2,R0<sup>₹€</sup>
169
              016700
                        000000G
                                             15:
                                                      MOV
    000406
              016701
170
                        000000G
                                                      MOV
                                                                MEND.R1
               160001
     000412
                                   Approved For Release 2005/07/12
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PPPR-

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W TO I MAN TOO
PPPR-
               0.M1110 27-MAR-80 15:24 PAGE 5-3
                                          Approved For Release 2005/07/12—CIA-RDP85-00514R000200020001-3
     172.000414 005201
                                                                                                       :+1 (BEACUSE OF ZERO-REL ADDRESS)
:SAVE COUNT
     173
                              177426
          000416 010167
                                                              MOV.
                                                                        R1.QXCNT
                                                              WRITE-THE-FLAG-(10" =-READ) AND-THE-TRANSFER-COUNT-INTO-
     175
176
                                                              WRITE-THE-FLAG-COM = KEHDA HAD THE THE FIRST-TWO-LOCATIONS-OF-CP-DATA-MEMORY.
     17\overline{7}
     178
         000422
                                                                         (SP)
                                                                                                       ;START-MICROCODE-AT-0
         000424
000430
     179
                                                              CALL
                                                                        SECCS.
     180
                    305046
                                                              CLR -
                                                                        -(SP)
                                                                                                       :RESET.BR.INHIBIT.
          000432
                                                                        CPCR
#377,-(SP)
     181
                                                              CALL
     182 000436
183 000442
                                                              MOV.
                    012746
                                                                                                       ;SET-MRP-MICRO-ADDRESS-=-X:FF: (JUMP-SELF)
                                                                        SEQMM-
                                                              CALL
          000446
     184
                    005046
                                                              CLR-
                                                                         -(SP)
                                                                                                       :RESET.BR.INHIBIT.
     185
          000450
                                                              CALL
                                                                        MRRCR
     i86
          000454
                    012767
                                         176422
                                                              MOV.
                                                                        #Q$REBK,QR$CR2
                                                                                                       ;RE-ARM-INTERRUPTS
     187
          000462
                    012767
                               120000
                                         176422
                                                              MOV-
                                                                        #<Q$SM+Q$ENOP>,QR$CR2.
                                                                                                       #SET-SEARCH-MODE + ENABLE INTERRUPTS #CLEAR ALL SELECTIONS #CLEAR DRIVE AND PULSE
          000470
                    012746
     188
                               888368
                                                              MOV.
                                                                        #Q$CSEL,-(SP)
     189 000474
                    052716
                               001001
                                                              BIS
                                                                        #<Q$LBD+Q$LBP>,(SP)
     190 000500
                    052716
                                                                        #Q$CMC,(SP)
                               030000
                                                              BIS
                                                                                                       :CLEAR · CP · NO+CLOCK ·
     191
          000504
                    005046
                                                              CLR
                                                                                                       SET NOTHING
         .000506
                                                              CALL
                                                                        CSR1
     193
                                                                                                       #WRITE-FLAG-TO-CD-ADDR-07
                    005067
     194 000512-
                                                              CLR
                                                                        CDADD.
     195 000516
196 000522
                    005067
                               177324
                                                                        CDDAT-
                                                              CALL
                                                                        LOADCD:
     197
          000526
                    016767
                               177316 177312
                                                              MOV.
                                                                        QXCNT, CDDAT.
                                                                                                       :WRITE-GEX ADDR/DATA PAIRS-COUNT-TO-CD-LOC-1
     198 000534
                                                                        LOADCD.
                                                              CALL
     199
                                                              NOW-FILL-EVERY-OTHER-LOCATION-IN CP-DATA-MEMORY-WITH-A-QEX-ADDRESS-(UP TO-THE-UPPER-LIMIT-OF-QEX-MEMORY-AS-ENTERED-IN-THE-COMMAND-LINE).
     200
     201
     202
203
     204 000540
                    016767
                              000000G 177300 25:
                                                                                                       :PUT GEX.ADDRESS IN CP.DATA MEMORY
                                                              MOV.
                                                                        MSTR2,CDDAT
                                                                                                       LOADCD INCREMENTS CDADD

INCREMENT AGAIN - PASS 1 ADDRESS
ADVANCE GEX ADDRESS
HAS UPPER MEM LIMIT BEEN REACHED
     205
          000546
                                                              CALL
                                                                        LOADOD:
     286
          000552
                    005267
                               177266
                                                                        CDADD:
                              000000G 000000G
     207
          000556
                    066767
026767
                                                              ADD:
                                                                        INCVAL, MSTR2
     208 000564
                                                              CMP
                                                                        MSTR2, MEND
     209 000572
210
                     101762
                                                              BLOS
                                                                                                       ;NO. CONTINUE.
                                                                                                                           4-
     211 000574
                    005046
                                                              CLR.
                                                                                                       :CLEAR NOTHING IN CSR1 7
                                                                        -(SP)
     212.000576
213 000602
                    012746
                               176000
                                                              MOV.
                                                                        #Q$NCLK,-(SP)
                                                              CALL
                                                                        CSR1
     214 000606
                    005067
                               176422
                                                              CLR:
                                                                        QR$CR2
                                                                                                       :SET-LOAD-MODE-
     215
                                                              RUN-THE-GEX-MICROCODE: MICOCODE-READS GEX-CONTENTS INTO-
CP DATA-MEMORY-SLOTS-SKIPPED-ABOVE, IE, THE DATA-IS READ
IN FOLLOWING EACH-ADDRESS: THE-FIRST-DATA-WORD-IS-IN CP-
     216
     217
     218
     219
                                                              DATA MEMORY LOCATION 3.
     220
     221 000612
     222-000612- 016746
223-000616
                                                                         CODE,-(SP)
                                                              MOV
                                                                                                       ; SELECT · WINDOW · OR LOCATION · MEMORY ·
                                                                                                       START CP MEROCODE AT X'3F0"
                                                                        PPCR
#1760.-(SP)
                                                              CALL
     224 000622
225 000626
                                                              MOV.
                    ð12746
                                                                        SECCS
                                                              CALL
     226 000632 005046
                                                              CLR:
                                                                        -(SP)
                                                                                                       :RESET.BR.INHIBIT.
                                                                        CPCR
#377
     227 000634
                                                              CALL
                                          MOV #377.-(SP) SET MRP-MICRO-ADDRESS-=-X*FF*. (JUMP-SELF)
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     228 000640
                    012746
                              000377
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PPPR-
          MACRO-M1110 27-MAR-80 15:24 PAGE-5-4
                                          Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
     229 000644
                                                                        SEQMM.
     230 000650
231 000652
                    995946
                                                              CLR.
                                                                        -(SP)
                                                                                                       :RESET.BR.INHIBIT.
                                                                        MRPCR #Q$REBK.QR$CR2 ;RE-ARM.INTERRUPTS #\CQ$LDPP+Q$ENOP\,QR$CR2.;SET.LOAD.PPS.MODE.+ ENABLE.INTERRUPTS
                                                              CALL.
          000656
                    012767
                               001000
                                         176422 -
                                                              MOV-
     233 000664
                    012767
                               022000
                                         176422
                                                              MOV:
                    012746
     234 000672
                               000360
                                                              MOV
                                                                        #Q$CSEL,-(SP)
                                                                                                       :CLEAR ALL SELECTIONS
                    052716
     235 000676
                               001001
                                                              BIS.
                                                                        #<Q$LBD+Q$LBP>,(SP)
                                                                                                       :CLEAR DRIVE AND PULSE
          000702
                    052716
     236
                               176000
                                                              віз
                                                                        #Q$NCLK,(SP)
                                                                                                       :CLEAR ALL NO-CLOCKS
     237
238
          000706
000710
                     005046
                                                              CLR
                                                                                                       :SET-NOTHING-
                                                              CALL
                                                                        CSR4
     240
241
                                                              WAIT-FOR-INTERRUPT-FROM-CP-
     242.000714
                                                              WT3E$S: #EFN.3
     243
     244 000726
                                                              CLEF$S: #EFN.3
     245
     246 000740
247 000742
248 000746
                    005046
                                                              GLR
                                                                        -(SP)
                                                                                                       :GLEAR · NOTHING · IN · CSR1
:SET · NO-CLOCKS ·
                    012746
                               176000
                                                              MOV
                                                                        #Q$NCLK,-(SP)
                                                              CALL
                                                                        CSR4
     249
          000752
                    005067
                               176422
                                                              CLR -
                                                                        QR$CR2
                                                                                                       :SET-LOAD-MODE-
     250
     251
252
                                                              PRINT- QEX- VALUES - FROM - CP - DATA - MEMORY -
     253
          000756
                     005046
                                                              BLR
                                                                        -(SP)
                                                                                                       :START MICROCODE AT 0
          000760
                                                              CALL
                                                                        SECOS
     255
          888764
                     005046
                                                                                                       ; RESET BR - INHIBIT -
     256
          000766
                                                                        CPCR
#377,-(SP)
                                                              CALL
          000772
                     012746
                               000377
                                                                                                       ;SET-MRP-MICRO-ADDRESS-#-X*FF* (JUMP-SELF)
                                                              MOV.
     258
          000776
                                                              CALL
                                                                        SEQMM-
          001002
001004
     259
                     005046
                                                              CLR
                                                                         -(SP)
                                                                                                       :RESET-BR-INHIBIT-
     260
                                                              CALL
                                                                        MRPCR
          001010
                     012767
                               001000
                                        176422
                                                                        #Q$REBK,QR$CR2
                                                              MOV.
                                                                                                       ; RE-ARM. INTERRUPTS.
                                                                        #<Q$SM+Q$ENOP>,OR$CR2.
#Q$CSEL,-(SP)
                     012767
     262-001016
                               120000
                                        -176422
                                                              MOV
                                                                                                       :SET SEARCH MODE + ENABLE INTERRUPTS :CLEAR ALL SELECTIONS :CLEAR DRIVE AND PULSE
     263
          001024
                     012746
                               000360
                    052716
052716
     264 001030
                               001001
                                                              BIS-
                                                                        #<Q$LBD+Q$LBP>,(SP)
          001034
     265
                               030000
                                                              BIS
                                                                        #Q$CNC,(SP)
                                                                                                       #CLEAR · CP · NO-CLOCK ·
          001040
     266
                     005046
                                                              CLR
                                                                         -(SP)
                                                                                                       :SET-MOTHING-
          001042
                                                              CALL
                                                                        CSR4
      268
          001046
                    016767
012767
                                                                        MSTRT, MSTR2
     269
                               000000G-000000G-
                                                              MOV-
                                                                                                       :REFRESH - START - ADDRESS -
     278
          001054
                                         176762 ·
176424
                                                                                                       START PRINTING FROM CP DATA ADDR 3
MOVE ATTN CODE TO LOD BUS REG
                               <u>аааааз</u>
                                                              MOV:
                                                                        #3.CDADD
                                                                        #3.CDADD:
#0$RDCD.QR$LBR ;MOVE.ATTN CUDE:10:602 603
#<Q$ATTN+Q$$M+Q$ENOP>,QR$CR2:;SET.ATTN.CODE.READY
OPECR2.R1 ;READ.CSR2
          001062
                     012767
                               000005
                                                    10$:
                                                              MOV.
          001070
                     012767
                                         176422
                                                              MOV
                               120100
                    016701
032701
                                                                                                       #READ-CSR2
     273
          001076
                                176422
                                                    5$:
                                                              MOV
     274 001102
                               000100
                                                              BIT
      275
          001106
                     001373
                                                              BNE
                                                                        5$
                                                                                                       :NO. READ AGAIN.
     277
          001110
                     016767
                                176730
                                          176424
                                                              MOV:
                                                                                                       :CD-MEMORY START-ADDRESS
                                                                        CDADD, QR$LBR
     278
                                                              MOV:
                                                                        #<Q$CCCP+Q$SM+Q$ENOP>,QR$CR2.;SET.CC.TO.CP.QR$CR2,R1 ;READ.CSR2 #Q$CCCP,R1 ;IS.CC.TO.CP.CLEAR.
          001116
                     012767
                               120040
                                          176422
          001124
                     016701
                                176422
                                                    6$:
     280 001130
                     032701
                               000040
     281
          001134
                     001373
                                                              BNE
                                                                                                       ;NO, READ-AGAIN-
                                          #1.0R$LBR : TRANSFER COUNT - 1 WORD 176422 MOV #4.0$CCCP+Q$SM+Q$ENOP > 0R$CR2 : SET : CC : TO : CP : R$CR2 : R1 : READ : CSR2

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     283 001136
                    012767
012767
                               000001
                                          176424
     284 001144
                               120040
                                         176422
          001152
                    016701
                               176422
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PPPR.
              0.M1110 27-MAR-80 15:24 PAGE 5-5.
                                      Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3
    286 001156
                  032701
                            000040
                                                         BIT.
                                                                  #Q$CCCP,R1
                                                                                              ; IS-CC-TO-CP-CLEAR
    287
         001162
                  001373
                                                         BNE
                                                                  7$
                                                                                              ;NO, READ AGAIN
    289 001164
                  012767
                            000000G-176424
                                                        MOV-
                                                                  #DATA1,QR$LBR
                                                                                              :CC.MEMORY DATA-BOFFER
                                                                  #<Q$CCCP+Q$SM+Q$ENOP>,QR$CR2.;SET.CC.TO.CP
    290 001172
                  012767
                            120040 176422
                                                        MOV
    291
    292
                                                        WAIT-FOR-INTERRUPT-FROM-CP
    293
    294 001200
                                                         WT3E$S: #EFN.3
    295
         001212
                                                         CLEF$S: #EFN.3
    297
    298
                                                         RE-ARM. INTERRUPTS
                                                                                                                \mathcal{T}^{\mathcal{F}}_{i}
    300 001224
                  012767
                            100400
                                     176422
                                                                                              :CLEAR INTERRUPT (USE HIT BUFFER INT)
                                                        MOV.
                                                                  #<Q$SM+Q$CHB>,QR$CR2
    301
         001232
                  012767
                            101000
                                      176422
                                                                  #<Q$SM+Q$REBK>,QR$CR2
                                                         MOV
                                                                  #<Q$SM+Q$REBK>,QR$CR2 RE-ARM,
#<Q$SM+Q$ENBK+Q$ENOP>,QR$CR2 ENABLE
    302-001240 - 012767
                            160000
                                     176422
     303
     304
                                                        PRINT-ONE-QEX-WORD
    305
     306 001246
                                                         GALL
                                                                  PRDATA
                                                                                              :PRINT-IT-
     307
    308 001252
                   062767
                            000002
                                                         ADD
                                                                                              #BUMP: CP: DATA: MEMORY ADDRESS:
#ADVANCE: ADDRESS:
#HAS: UPPER MEMORY: LIMIT: BEEN: REACHED!
                                                                  #2,CDADD
    309
         001260
                            000000G · 000000G
000000G · 000000G
                   866767
                                                                  INCVAL, MSTR2
         001266
                   026767
                                                                  MSTR2, MEND
                                                         CMP
    311
         001274
                   101672
                                                         BLOS
                                                                  104
                                                                                              :NO, CONTINUE
    312-001276
                   832767
                            000000G · 000000G
                                                        BIT
                                                                  #LOOP, BASE
                                                                                              ;LOOP.ON.?
    313 001304
                  881482
                                                                                              :NU. EXIT: FOR DEX READ
                                                                                              :NO, EXIT
     314 001306
                  000167
                            177300
                                                         JMP
                                                                  STRIMC
    315
                                                                                                       - ---
    316
317
                                                        RE-ARM. INTERRUPTS
    318
         001312
                  012767
                            100400
                                     176422
                                               84:
                                                        MOV
                                                                  #<Q$SM+Q$CHB>,QR$CR2
                                                                                              ;CLEAR INTERRUPT ( USE HIT BUFFER INT)
    319 001320
                  012767
                            101000
                                      176422
                                                        MOV
                                                                  #<Q$SM+Q$REBK>,QR$CR2
                                                                                              :RE-ARM
    329
         001326
                  012767
                            160000
                                      176422
                                                        MOV
                                                                  #<Q$SM+Q$ENBK+Q$ENOP>,QR$CR2::ENABLE:
    321
         001334
                   005046
                                                        BLR
                                                                  -(SP)
                                                                                              : CLEAR - NOTH ING - IN - CSR 1
    323 001336
324 001342
                                                        MŌŸ
                   012746
                            176000
                                                                  #Q$NCLK,-(SP)
                                                                                              ;SET-NO-CLOCKS
                                                        CALL
                                                                  CSR4
     325 001346
                   005067
                            176422
                                                        CLR
                                                                  QR$CR2
                                                                                              ;SET-LOAD-MODE
    326
327
         001352
                  000167
                            000602
                                                         JMP
                                                                  PR4X
    328
     329
                                                        PRINT FROM FAL POINTER MEMORY PRINT FROM FAL COUNTER MEMORY
    339
    331
                                                        PRINT.FROM.FAL.OVERFLOW.MEMORY
     333
    334 001356
335 001364
                  012767
                            000046
                                      176466
                                               PR4FP:: MOV
                                                                  #Q$FP,CODE
                                                                                              :SET-MEMORY-CODE-=-POINTER-
                   888487
                                                         BR
                                                                  PFAL
         001366
                   012767
                            000045
                                                        MOV
                                                                                              SET CODE, ≠ COUNTER
                                      176456
                                               PR4FC::
                                                                  #Q$FC,CODE
    337
         001374
                  000403
                                                                  PEAL
    338 001376
                  012767
                            000044
                                     176446
                                               PR4F0::
                                                        MOV
                                                                  #Q$FO,CODE
                                                                                              :SET.CODE. = OVERFLOW
    340 001404
                  016746
                            000000G
                                               PFAL:
                                                        MOV
                                                                  FAHIGH, - (SP)
                                                                                              :SUPPLY MEMORY UPPER LIMIT:
:LOWER LIMIT:
:PREPARE FOR LOAD:
                  316746
    341 001410
                            000000G
                                                        MOV.
                                                                  FALOW, -(SP)
BUFSET
    342 001414
                                                        CALL
                                      Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
```

```
MACRO M1110 27-MAR-80 15 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
                                                                                                  BCC -
                                                                                                                                                                          :OK. CONTINUE
                          i03006
                                                                                                                     1$
343 001420
                                                                                                                                                                          :VALUE FOR QCL POINTER:
                                                                                                                     #077777,-(SP)
                                                                                                  MOV.
344
       001422
                          012746
                                            077777
                                                                                                   CALL
                                                                                                                     STOP
345
       001426
                                                                                                   JMP.
                                                                                                                    PR4X
346
        001432
                                            999522
347
                                                                                                                                                                          ;LOAD-ADDR INTO-QCL-POINTER
                                                                                                   MOV
                                                                                                                     MSTR2,-(SP)
                                            000000G
                                                                                1$:
                          016746
348 001436
       001442
                                                                                                   CALL
                                                                                                                     STOP
349
                                                                                                   MOV.
                                                                                                                     CODE, - (SP)
        001446
                          016746
                                             176400
                                                                                                                                                                          :WRITE SELECTION TO CONTROL REG:
:DO PPS TO LOD BUS:
:GET WORD FROM FAL:
351 001452
                                                                                                   CALL
                                                                                                                     PPLB
352 001456
                                                                                                                     (SP)+.DATA1
                                             000000G
                                                                                                   MOV
353
        001462
                          012667
                                                                                                                                                                          :PRINT IT:
                                                                                                   CALL
                                                                                                                     PRDATA.
354 001466
355 001472
                                                                                                                     #Q$CLR,-(SP)
                                                                                                   MOV-
                           012746
                                             000040
356
         001476
                                                                                                                     PPCR
357
                                                                                                                                                                           :ADVANCE:ADDRESS:
:HAS:UPPER MEMORY:LIMIT:BEEN:REACHED:
:NO: CONTINUE:
                                                                                                                     INCVAL, MSTR2
                                             000000G · 000000G
                           866767
358 001502
                                             000000G 000000G
                                                                                                   CMP
                                                                                                                     MSTR2, MEND.
         001510
                           026767
359
                                                                                                   BLOS
 360
         001516
                            101747
                                                                                                                     1$
                                                                                                                                                                           ;LOOP.ON.?
;YES, CONTINUE.
;VALUE.FOR QCL.PO<u>INTER</u>
                                                                                                                     #LOOP, BASE
                                             000000G - 000000G
 361
         001520
                            032767
                                                                                                    BHE
                           001006
362 - 001526
                                                                                                                     #077777.-(SP)
 363
         001530
                                             077777
                                                                                                    MOV
                                                                                                                                                                           :LOAD QCL POINTER
                                                                                                                     STOP
                                                                                                    CALL
         001534
                                                                                                                     PR4X
                                                                                                                                                                           :EXIT
                                             000414
                            000167
 365
         001540
                                                                                                                                                                           ; INIT START ADDRESS
                           016767
 366
         001544
                                             000000G · 000000G · 2$:
                                                                                                    MOV:
                                                                                                                     MSTRT, MSTR2
                                                                                                                                                                           : AND REPEAT PRINT
 367
         001552
                            000731
                                                                                                                     1:5
 369
 370
371
                                                                                                    PRINT.FROM.QLB.REFERENCE.PAGE
                                                                                                                                                                           :SUPPLY MEHORY UPPER LIMIT
                                                                                  PR4QR::
          001554
          001554
                                                                                                    MOV
                                                                                                                      LHHIGH,-(SP)
                            016746
                                              000000G
 374
                                                                                                                      LHLOW,-(SP)
                                              000000G
                                                                                                    MOV:
 375
          001560
                            016746
                                                                                                                                                                            :PREPARE FOR LOAD
                                                                                                                      BUFSET.
 376
377
          001564
                                                                                                    CALL
                                                                                                    BCC
          001570
                             103012
                                                                                                                      #Q$QHLT,-(SP)
                                                                                                                                                                            ;HALT.
                                              000013
         001572
001576
 378
                            012746
  379
                                                                                                    CALL
                                                                                                                      PPCR.
                                                                                                                                                                            ;X1400" = · ILLEGAL · ADDRESS
                                                                                                                      #2000,-(SP)
                                              002000
                                                                                                    MOV-
  380
          001602
                            012746
                                                                                                                                                                            ; SEND . TO . HP
                                                                                                    CALL:
                                                                                                                      LBPP
          001606
          001612
                            000167
                                              000342
  383
                                                                                                                                                                            :SELECT ADDRESS FOR OLB PAGE:
:WRITE SELECTION TO CONTROL REG
                                                                                                    MOV-
                                                                                                                      #Q$QLA,-(SP)
  384 001616
                            012746
                                              000053
                                                                                                    CALL
                                                                                                                      PPCR
  385
          001622
                                                                                                                                                                            :LOAD ADDR INTO OCL POINTER
                                                                                                                      MSTR2,-(SP)
  386
                                                                                                     MOV.
          001626
                             016746
                                              000000G
                                                                                                                      LBPP
                                                                                                     CALL
  387
          001632
                                                                                                                                                                            ;SELECT-QLB-REF-PAGE
                                                                                                     MOV.
                                                                                                                       #Q$QLR,-(SP)
  388
          001636
                             012746
                                                                                                                      PPCR
                                                                                                     CALL
  389
          001642
                                                                                                                                                                            ;DO PPS TO LOD BUS
;GET WORD FROM FAL
                                                                                                     CALL
  390 001646
391 001652
                            012667
                                               000000G
                                                                                                     MOV.
                                                                                                                       (SP)+.DATA1
                                                                                                                      PRDATA-
                                                                                                                                                                             :PRINT-IT-
                                                                                                     CALL
   392
          001656
  393
                                                                                                                                                                             :ADVANCE:ADDRESS:
:HAS:UPPER MEMORY:LIMIT:BEEN:REACHED:
                                               000000G - 000000G
                                                                                                     ADD:
                                                                                                                       INCVAL, MSTR2
  394 001662
                             866767
  395
                             026767
                                                                                                    CMP ·
BLOS
                                                                                                                       MSTR2.MEND
          001670
                                                                                                                                                                               LOOP ON THE STATE OF THE STATE O
                                                                                                                       1$
           001676
                             101747
                                                                                                                       #LOOP,BASE
                            032767
                                              000000G · 000000G
                                                                                                     BIT.
  397
          001700
001706
                                                                                                                                                                            :YES, CONTINUE:
                                                                                                     BHE
                                                                                                                       2事
                             001012
  398
```

#Q\$QHLT,-(SP)

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MOV

PPPR-

001710

399

012746

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-3114 ti

PR4X:

PPPR-

PPPR MACRO M1110 27-MAR-80 15 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3

457 002160 012746 000040 MOV #Q\$CLR,-(SP)
458 002164 CALL PPCR
459 002170 042767 0000000 BIC #<ONCE+OUT>,BASE460 002176 000167 000000 JMP PPSXX

:CLEAR·PPS

#(ONCE+OUT),BASE: CLEAR PRINT CONTROL FLAGS: %
KILL ST. (IF THERE WAS ONE)

```
PPPR-
               70 M1110 27-MAR-80 15:24 PAGE For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
     463
     464
     465
                                                            LOAD · CP · DATA MEMORY
                                                  3
     466
     467
         002206
                                                  LOADCD:
     469 002206
470 002214
                    012767
                              000003
                                        176424
                                                            MOV
                                                                      #Q$LDCD,QR$LBR
                                                                                                    :MOVE.ATTH CODE.TO.LOD.BUS.REG
                    012767
                              120100
                                        176422
                                                            MOV
                                                                      #<Q$ATTN+Q$SM+Q$ENOP>,QR$CR2:;SET ATTN CODE READY
         002222
                    016701
                              176422
                                                  15:
                                                            MOV
                                                                      QR$CR2.R1
                                                                                                    :READ CSR2
     472.002226
                    032701
                              000100
                                                                      #Q$ATTN,R1
                                                            BIT
                                                                                                    : ATTN : CLEAR
     473
         002232
                    001373
                                                            BNF
                                                                      15
                                                                                                    :NO, READ-AGAIN-
     474
     475
         002234
                    016767
                              175604
                                        176424
                                                                      CDADD.QR$LBR: ;CD:MEMORY START-ADDRESS:
#<Q$CCCP+Q$SM+Q$ENOP>,QR$CR2:;SET:CC:TO:CP:
QR$CR2.R1 ;READ CSR2 ;HQ$CCCP,R1 ;IS:CC:TO:CP:CLEAR:
                                                            MOV
         002242
002250
002254
     476
477
                    012767
                              120040
                                        176422
                                                            MOV:
                    016701
                              176422
                                                  2$:
                                                            MOV.
     478
                    B32781
                              000040
                                                            BIT.
     479
          002260
                    001373
                                                            BHE
                                                                      2$
                                                                                                    :NO, READ-AGAIN-
     480
     481 002262
482 002270
                    012767
                              000001
                                        176424
                                                                      #1,QR$LBR: ;TRANSFER:COUNT =:1 WORD
#<Q$CCCP+Q$SM+Q$ENOP>,QR$CR2:;SET:CC:TO:CP:
                                                            MOV
                    012767
015701
                              120040
176422
                                        176422
                                                            MOV
         002276
     483
                                                  3$:
                                                            MOV:
                                                                      QR$CR2,R1
                                                                                                    ;READ CSR2
;IS·CC·TO·CP·CLEAR
     484
         002302
                    032701
                              000040
                                                            BIT
                                                                      #Q$CCCP,R1
     485
         002306
                    001373
                                                            BNF
                                                                      3生
                                                                                                    :NO. READ AGAIN
     486
          002310
                    012767
                              0000461
                                        176424
                                                            MOV
                                                                      #CDDAT,QR$LBR: ;CC:MEMORY DATA:BUFFER
#<Q$CCCP+Q$SM+Q$ENOP>,QR$CR2:;SET:CC:TO:CP:
                                                                      #CDDAT,QR$LBR
     488
         002316
                    012767
                              120040
                                        176422
                                                            MOV:
     489
     490
                                                            WAIT-FOR-INTERRUPT-FROM-CP
     491
     492
         002324
                                                            WTSE$S . #EFN.3
     493
     494
         002336
                                                            CLEF$S: #EFN.3
     495
     496
                                                            RE-ARM INTERRUPTS
     497
     498
         002350
                    005267
                              175470
                                                            INC
                                                                                                    ; BUMP · CP · DATA · MEMORY ADDRESS
     499
         002354
                    012767
                              100400
                                        176422
                                                            MOV
                                                                      #<Q$SM+Q$CHB>,QR$CR2
                                                                                                    :CLEAR : INTERRUPT : (USE : HIT : BUFFER : INT)
     566
         002362
                    012767
                              101000
                                        176422
                                                           MOV-
                                                                      #<Q$SM+Q$REBK>,QR$CR2
                                                                                                    ; RE-ARM
     501
         002370
                    012767
                              160000
                                                            MOV
                                                                      #<Q$SM+Q$ENBK+Q$ENOP>,QR$CR2 ;ENABLE
    502
         002376
                                                            RETURN
    583
    504
                    000001
                                                            .END
```

```
MACRO M1110 27-MAR-80 15:24 PAGE For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
SYMBOL TABLE
ALUCKE=-040000
                                                                       BYTE91=-000133
BYTE92=-000134
                                    BYTE4 = 000004
                                                                                                           MAROUT=:000002
                                                                                                                                               Q$CLR - = - 000040
ALUOE - - 004000
A01 - 010000
BASE - - ******
                                    BYTE40= 000050
                                                                                                           MAR.LO= 002000
MAR.OU= 000040
MBKALL= 001000
                                                                                                                                               Q$CNC -- 030000
                                    BYTE41= 000051
                                                                        BYTE93= 000135
                                                                                                                                                      = 000060
                                   BYTE42=:000052
                                                                        BYTE94= 000136
                                                                                                                                               Q$CPCC= 000010;:
KP ××××××××× GX
                                   BYTE43= 000053
                                                                       BYTE95= 000137
BYTE96= 000140
                                                                                                           MBKCLK=-000400
MEND- =-***** GX-
                                                                                                                                               Q$CP2.=.000260
Q$CSC.=.010000
BITVAL = 000000
BIT0 = 000001
                                    BYTE44= 000054
                                   BYTE45= 000055
                                                                        BYTE97= 000141
                                                                                                           MMADRD = 000100
MMLEFT = 000002
MMOE = 000004
                                                                                                                                               Q$CSEL = . 000360
         = 000002
3IT1
                                   BYTE46 = 000056
BYTE47 = 000057
                                                                        BYTE98= 000142
                                                                                                                                               Q$CSET= 0000002
Q$CSP = 020000
BIT10
         = 002000
                                                                       BYTE99= 000143
BITil
         = 004000
                                   BYTE48 = . 000060
                                                                       BYTVAL = . 000144
CBKALL = . 001000
                                                                                                           MMWRTE = . 000010
                                                                                                                                               Q$DMA - = - 000001
BIT12 - 010000
                                   BYTE49=-000061
BYTE5 =-000005
BYTE50=-000062
                                                                                                     MNOBRE = 100000
MREN1 = 000001
002 MREN2 = 020000
                                                                                                                                               Q$ENBK = . 040000
BIT13 = 020000
                                                                        CBKCLK= 000400
                                                                                                                                               Q$ENOP= 020000
                                                                                                                                              Q$FAL = 004000
Q$FC = 000045
Q$FC = 000044
Q$FP = 000046
         = 040000
                                                                       CDADD
         = 100000
BIT15
                                    BYTE51 = . 000063
BIT2 = 000004
BIT3 = 000010
                                                                       CDDAT
                                                                                   000046R
                                                                                                     BYTE52=-000064
BYTE53=-000065
BYTE54=-000066
                                                                        CHOBRE = 100000
                                                                                                           MSTRT = ******** GX
                                                                        CODE -
                                                                                  000052R
                                                                                                          MSTR2 = · ***** GX
         = 000026
                                                                       CPCCEN= 010000
CPCR = ****** GX
                                                                                                           MSYN - 000040
                                                                                                                                               Q$HBF - = 000002
         = · 000040
= · 000100
BIT5
                                    BYTE55 = . 000067
                                                                                                                                               Q$ICP - 0000002
Q$IHB - 000003
                                                                                                                    = - 000144
                                                                                                           BIT6
                                   BYTE56 = 000070
BYTE57 = 000071
                                                                       CPREAD = 040000
         = 000200
                                                                       CPWRTE = . 020000
CSADRD = . 000004
                                                                                                                                               Q$IHRL= 000003
Q$IMRP= 000007
BIT8
         = - 000400
                                    BYTE58= 000072
                                                                                                           PACK -
                                                                                                                    = · ****** GX ·
         = 001000
BIT9
                                   BYTE59= 0000073
                                                                       CSEQCI = 100000
                                                                                                                                        002-0$LBD = 001000
002-0$LBD = 001000
002-0$LBDP= 001001
0$LBP-= 000001
0$LDCD= 000003
                                                                                                           PFAL -
                                                                                                                      001404R
BUFSET= ******* GX
                                                                       CSOE = :000040
CSR1 = : ******** GX:
                                   BYTE6 = 000006
                                                                                                           PGSEL2 001764R
BYTE0 = 000000
BYTE1 = 000001
                                   BYTE60= 000074
BYTE61= 000075
                                                                       CSR1
                                                                                                           PLB.
                                                                                                                    CSWRTE= 000100
DATA1 = ******** GX
                                                                                                                       000020
                                   BYTE62=-000076
BYTE63=-000077
BYTE64=-000100
BYTE10= 000012
                                                                                                           PLD.
                                                                                                                    = -000030
                                                                                                                                               Q$LDMD= 000004
BYTE11= 000013
                                                                       DBR.RD=-000001
DB$CPP= 001457
DB$SPT=-000026
                                                                                                           PLRWR - = - 000200
                                                                                                                                               Q$LDPP=-002000
Q$LHP-=-010000
BYTE12=-000014
BYTE13=-000015
                                                                                                           PLR.EN= 000200
                                   BYTE65=-000101
BYTE66=-000102
BYTE67=-000103
                                                                                                                                        Q$MNC = 140000
Q$MR = 000052
002 Q$MRP = 000040
                                                                                                           PPCR· =·******* GX
PPLB· =·******* GX
BYTE14= 000016
                                                                       DB$TPC=.000023
DISPGS=.100000
BYTE15=-000017
BYTE16=-000020
BYTE17=-000021
                                                                                                           PPPR4
                                                                                                                       000054RG
                                   BYTE68=-000104
BYTE69=-000105
BYTE7 =-000007
                                                                        DMAAWR = . 000005
                                                                                                                                        002.0$MRP7=.000040

0$MRP2=.000240

002.0$MSC-=.04000

0$MSET=-000004

002.0$MSP-=.100000
                                                                                                           PPSXX- = ******* GX
                                                                       DMARRD = . 000003
                                                                                                                       000360R
                                                                                                           PQEX-
BYTE18= 000022
                                                                       DMARWR = . 000004
                                                                                                           PRDATA=
                                                                                                                       жжжжж БХ
BYTE19=-000023
BYTE2-=-000002
                                    BYTE70= 000106
                                                                       EFN.3 = ****** GX-
ENBR = 010000
                                                                                                                       001366RG
                                                                                                           PR4FC
                                    BYTE71= 000107
                                                                                                           PR4F0
                                                                                                                       001376RG
                                                                                                                                              Q$NCLK= 176000
BYTE20= 000024
                                   BYTE72= 000110
BYTE73= 000111
                                                                       ERRII = - жжжжжж
                                                                                                           PR4FP
                                                                                                                                        002 Q$PP = 000100
Q$PPSW= 000320
002 Q$PP2 = 000300
                                                                                                                       001356RG
BYTE21= 000025
                                                                               = · ******* GX
                                                                       ERR4
                                                                                                           PR4LN
                                                                                                                      000044 G
BYTE22= 0000026
                                   BYTE74= 000112
                                                                       ERR5
                                                                                                           PR4QL
                                                                                                                       000352RG
BYTE23= 000027
                                    BYTE75=-000113
                                                                       ERR7
                                                                                =·******** GX
                                                                                                           PR40R
                                                                                                                       001554RG
                                                                                                                                        002.Q$QHLT=.000013
BYTE24= 000030
                                                                                                                                        002 · Q$QLA · = · 000053
                                   BYTE76= 000114
BYTE77= 000115
                                                                       FAHIGH= жжжжжж
                                                                                                           PR40W
                                                                                                                       000342RG
BYTE25= 000031
                                                                       FALOW: = : ******* GX
                                                                                                           PR400
                                                                                                                       001744RG
BYTE26=-000032
                                   BYTE78= 000116
                                                                       FIND: =: ****** GX
HANG: =: ******
                                                                                                           PR401
                                                                                                                       001752RG
                                                                                                                                              · Q$QLB · = · 000054
BYTE27=-000033
BYTE28=-000034
                                    BYTE79=-000117
                                                                                                                                              0$QLR = 000051

0$QLR = 000001

0$QU = 000042

0$RUCD = 000005

0$RUCD = 000006
                                                                                                           PR402
                                                                                                                       001760RG
                                   BYTE8 = 000010
BYTE80= 000120
                                                                        INCVAL= ****** GX
                                                                                                           PR4TBL
                                                                                                                       000000RG
                                                                                                                                        002·Q$QŲ
BYTE29=:000035
                                                                       KILL: = : жжжжж GX
LBPP: = : жжжжж GX
                                                                                                           PR4X
                                                                                                                       002160R
BYTE3 = 000003
                                   BYTE81= 000121
                                                                                                           QR$CR1= 176420
BYTE30 = . 000036
BYTE31 = . 000037
                                    BYTE82 = . 000122
                                                                       LHHIGH= ******* GX
                                                                                                                                               Q$REBK= 001000
                                                                                                           QR$CR2=:176422
QR$LBR=:176424
                                                                       LHLOW-=-********* GX
LHLOW-=-******** GX
LCADCD-***002206R-
LOC.EN=-000100
LOC.WA=-040000
                                    BYTE83=-000123
                                                                                                                                        Q$RNC.=.006000
002.Q$RSC.=.004000
Q$RSET=.000010
BYTE32= 000040
                                   BYTE84=:000124
                                                                                                     002 · QXCNT
                                                                                                                     000050R
BYTE33= 000041
                                    BYTE85 = 000125
                                                                                                           OXHIGH= *****
BYTE34= 0000042
                                    BYTE86= 000126
                                                                                                           QXLOW--- жжжжжж GX
BYTE35 = . 000043
                                                                       LOC.WB= 100000
                                   BYTE87 - 000127
                                                                                                           Q$ATTN= 000100
                                                                                                                                                       = 000120
BYTE36= 000044
                                   BYTE88= 000130
                                                                                                           Q$BCL - - 000001
Q$CCCP - 000040
Q$CHB - - 000400
                                                                                                                                               BYTE37= 000045
                                                                       MAREN 1 = . 000001
                                                 | USCHB | = | 000400 | RGG | VA = | 020000 | MARLOD = | 0190000 | OSCHR = | 000400 | RTNPT | = | жижжиж | GX | Approved For Release 2005/07/12 | CIA-RDP85-00514R000200020001-3
BYTE38= 000046
                                   BYTE9 = 000011
BYTE39 = 000047
                                   BYTE90= 000132
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O M1110 27-MAR-80 15:24 PAGE 6-2
Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
PPPR.
SYMBOL -
SCAN-
                               T$CLK - = - 002000
                                                              MORDI = AAAAAA
                                                                                            WORD40=-000120
                                                                                                                           WORD71=-000216
SELPG -- ****** GX
                               T$DISK=:000200
                                                              WORD10= 000024
                                                                                            WORD41= 000122
WORD42= 000124
                                                                                                                           WORD72= 000220
SEGCS - - ****** GX
                               T$DRD - = - 000004
T$EMEM = - 010000
                                                              WORD11 - 000026
                                                                                                                           WORD73=
SEQMM = ****** GX
                                                              WORD12= 000030
                                                                                            WORD43÷ 000126
                                                                                                                           WORD74= 000224
SEQ.CI= 000010
                               T$FSAA= . 000000
                                                              WORD13= 000032
                                                                                            WORD44= 000130
                                                                                                                          WORD75= 000226
WORD76= 000230
WORD77= 000232
WORD78= 000234
                                                                                                                           WORD75=
STOP.
                               T$F$AB=:000004
                                                              WORD14= 000034
                                                                                            MORD45 = - 000132
          000612R
STRTMC.
                          002 · T$FSAC = · 000014
                                                              WORD15 - 000036
                                                                                            WORD46= 000134
S$CLR.=
          000000
                               T$FSB2≈ 000010
                                                             WORD16= 000040
WORD17= 000042
                                                                                            WORD47= 000136
S$LA
          000001
                               T$IB-
                                      = 0000026
                                                                                            WORD48 = . 000140
                                                                                                                           WORD79= 000236
S$QB
          คดดดดกร
                               T$IBAR= 000024
                                                              WORD18= 000044
                                                                                            WORD49 - 000142
WORD5 - 000012
                                                                                                                           WORD8 - 000020
S#QR
          000006
                               T$IBE - = 020000
T$IBF - = 040000
                                                              WORD19= 000046
                                                                                                                           WORD80=.000240
S$QX
          000004
                                                              WORD2 - = - 000004
                                                                                            WORD50=.000144
                                                                                                                           WORD81=.000242
WORD82=.000244
SSSR
          . 000007
                               T$ICD·≃·000040
                                                              WORD20 = 000050
                                                                                            WORD51= 000146
S$S4
          . คคคค เค
                               T$MODE = . 004000
                                                              WORD21= 000052
                                                                                            WORD52= 000150
WORD53= 000152
                                                                                                                           WORD83= 000246
S$S2
        = 000014
                               T$OB -
                                      = 0000036
                                                              WORD22=-000054
                                                                                                                           WORD84= 000250
TD$CTR=-176370
                               T$0BE · = · 004000
                                                              WORD23= 000056
                                                                                            WORD54= 000154
                                                                                                                          WORD85=-000252
TD$CTW= 176360
TD$INL= 004000
                               T$0BF - 010000
                                                              WORD24= 000060
                                                                                            WORD55= 000156
                                                                                                                           WORD86 = . 000254
                               T$0BRA= · 000034
                                                              WORD25 - 000062
                                                                                            WORD56= 000160
WORD57= 000162
                                                                                                                           WORD87= 000256
TD$MEM= 000270
                               T$0BWA=-000032
                                                              WORD26= 000064
                                                                                                                           WORD88= 000260
TD$0AR= 176344
TD$0TR= 176346
                               T$0UTA= 100000
                                                             WORD27= 000066
WORD28= 000070
                                                                                            WORD58= 000164
                                                                                                                          WORD89= 000262
WORD9 = 000022
                               T$RBD0= 000200
                                                                                            WORD59= 000166
TD$0RD= 000274
                                                             WORD29 - 000070
WORD3 - 000006
                               T$RNB - - 000040
                                                                                            WORD6 - 000100
                                                                                                                           WORD90= 000264
TD$SW-=-176376
                               T$RSET= 040000
                                                                                            WORD60= 000170
                                                                                                                          WORD91= 000266
WORD92= 000270
TD$TAR=:176372
                                      = 000022
                                                             WORD30= 000074
                                                                                            WORD61= 000172
TD$TAble - 176362
                               T$SCLK= 020000
                                                              WORD31= 000076
                                                                                            WORD62= 000174
WORD63= 000176
                                                                                                                           WORD93= 000272
TD$TDR= 176374
                               T$SEG1 = : 000000
                                                              WORD32=-000100
                                                                                                                          WORD94-000274
WORD95-000276
TD$TDW= · 176364
                               T$SEG2= 000001
                                                             WORD33=-000102
                                                                                            WORD64= 000200
T$AD· = 000020
T$BA· = 000002
                               T$SEG3=-000002
                                                             WORD34= 000104
                                                                                            WORD65= 000202
WORD66= 000204
WORD67= 000206
                                                                                                                           WORD96=∵000300%
                               T$SO - - 000001
T$UBUS- 100000
                                                              WORD35= 000106
                                                                                                                           WORD97= 000302
       = 0000010
T$BD∙
                                                              WORD36=-000110
                                                                                                                           WORD98 = . 000304
T$BSO·≕-100000
                               T$1CLK=-000400
                                                             WORD37=-000112
                                                                                            WORD68= 000210
                                                                                                                           UORD99= · AAA3A6
T$BT: =:000020
                               T$8BEN= 000020
                                                             WORD38= 000114
                                                                                            WORD69= 000212
                                                                                                                           WRDVAL = . 000310
T$BTAR=:000030
                               UBD: IN= 000020
                                                             WORD39= 000116
                                                                                            WORD7 - 000016
                                                                                                                           XTREAD=-001000
T$BTD - = 002000
T$CD - = 000100
                                                             WORD4 - 000010
                               WORD0 = 000000
                                                                                            WORD70= 000214
                                                                                                                           XTWRTE= 000400
          000000
000000
 ABS.
                        000
                        991
PPPP
          002400
                        002
ERRORS · DETECTED:
                       0
VIRTUAL MEMORY USED:
                           3651 WORDS: (-15 PAGES)
DYNAMIC MEMORY: 4916 WORDS: (18 PAGES)
ELAPSED:TIME: 00:00:56
PPPR:PPPR/-SP=C20:13IM:C20:13PPPR
```

```
PPREST-
               )<sup>0 M1110</sup> 27-MAR-80 <sup>15</sup> Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3 🐇
                                                              .FITLE - PPREST. .PSECT - PPREST.
          000000
       23456789
                                                              MARDWARE QUERY RESOLVER 'MANUAL' DEBUGGING AIDS
                                                              PIPELINE PROCESSOR TEST ROUTINES
                                                              COMMANDS:
                                                                        STORE INTO A PP REGISTER
READ FROM A PP REGISTER SWITCH QLB PAGES
                                                              ST
RE
      10
      11
                                                              ER
                                                                         ERASE · MEMORIES
      13
      14
15
                                                              ONCE - A - COMMAND - HAS - BBEN - EXECUTED (OR: AN - ERROR - ENCOUNTERED) THIS - MODULE - RETURNS - CONTROL - TO - THE - MODULE - PPS - AT _EOCATION - PPSXX:
       16
                                                               'PPSXX'.
       17
       18
      19
      22222222222333334
                                                              TABLE OF VALID REGISTER MNEMONICS AND ASSOCIATED ROUTINE
                                                              ADDRESSES -
          000000
                                                    ST4TBL::
          000000
                         103
                                   122
                                                               .ASCII
                                                                                                        ; PPS · CONTROL · REGISTER
          000002
                                                                        ST4CR
                                                              . WORD
          000004
                                   120
                                                               .ASCII.
                                                                                                        ; QCL · POINTER
          000006
                    000202
                                                               .WORD
                                                                         ST4QP
          000010
                        115
                                   122
                                                               .ASCII
                                                                                                        : MASK - REGISTER
          000012
                     000214
                                                               .WORD
                                                                        ST4MR
          000014
                    121
000236
                                   122
                                                               .ASCII
                                                                        /QR/
                                                                                                        :PPS:Q-REGISTER
          000016
                                                               .WORD
                                                                        ST40R
                     000004
                                                    ST4LH
                                                                         <.-ST4TBL>/4
      35
36
37
38
                                                              TABLE OF VALID REGISTER MNEMONICS AND ASSOCIATED ROUTINE ADDRESSES
          000020
                                                    RE4TBL:
      39
                                   127
                                                               ASCII.
                                                                         ZS1JZ
                                                                                                        :STATUS-WORD
      40
          000022
                    000360
                                                               .WORD
                                                                        RE4SIJ
      41
42
                    000001
                                                    RE4LN.
                                                                         <.-RE4TBL>/4
      43
44
                                                              ERASE
      45
          000024
                                                    ER4TBL:
      46
          000024
                        106
                                   103
                                                              .ASCII
                                                                                                        :FAL . COUNTER . MEMORY .
      47
          000026
                    000600
                                                                        ER4FC
      48
          000030
                        121
                                   122
                                                               .ASCII
                                                                         Z0RZ
                                                                                                        :QLB - REF - PAGE
      49
          000032
                    000744
                                                               .WORD
                                                                        ER40R
      50
          000034
                        121
                                   060
                                                               .ASCII
                                                                         /0.07
                                                                                                        : OLB : PAGE : A
      51
          000036
                    001102
                                                                        ER400
      52
53
54
          000040
                        121
                                   061
                                                               .ASCII
                                                                         /01/
                                                                                                        :QLB PAGE
          000042
                    001106
                                                              .WORD
                                                                        ER401
         000044
                        124
                                   062
                                                                        7027
                                                                                                        : QLB - PAGE - 2
      55
56
57
         000046
                    001114
                                                                        ER402
                                                              .WORD
                    000005
                                                                         <.-ER4TBL>/4
                                           Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
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PPREST MACRO M1110 27-MAR-80 15 25 Proved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
      58
      59
                                                               STORE
      60
                                                               PERFORM THIRD LEVEL PARSING
EG. IN THE COMMAND:
PP>ST 0 CR
                                                    :
      61
62
63
                                                               PARSE THE 101
      65
66
          000050
                                                    ST4::
      67
          000050
                                                               CALL
                                                                         FIND
                                                                                                         :FIND.A.OPERAND.IN.COMMAND.LINE
      68
          000054
                     103004
                                                               BCC
                                                                         1$
                                                                                                         OK, CONTINUE
      69
70
71
          000056
                                                               CALL
                                                                         ĒRR4
                                                                                                         :NOTHING THERE
:RETURN TO TOP OF LOOP (PROMPT)
:CONVERT VALUE IN COMMAND LINE TO BINARY
          000062
                     000167
                               000176
                                                               JMP
                                                                         ST4X
          000066
                                                    1$:
                                                               CALL
                                                                         PACK
          000072
000074
                     103004
                                                               BCC
                                                                         2$
                                                               CALL
                                                                         ERR5
      74
75
76
77
78
          000100
                    000167 000160
                                                               JMP
                                                               CONTINUE - PARSING-
                                                    ;
                                                               FIND THE REGISTER MNEMONIC IN THE COMMAND LINE
          000104
000110
000112
      79
                                                    2$:
                                                               CALL
                                                                         FIND
                                                                                                         :LOCATE · A · NON-BLANK
      80
81
                     103004
                                                               BCC.
                                                                         3$
                                                                         ĒRR4
      82
          000116
                     000167
                               000142
                                                               JMP.
      83
84
                                                               MATCH: THE: MNEMONIC: FROM: THE: COMMAND: LINE: AGAINST: THE
      85
86
                                                               TABLE OF VALID MNEMONICS.
      87
88
          000122
000126
                    012700
                               000004
                                                               MOV
                                                                         #ST4LN,R0
                                                                                                         :NUMBER OF TABLE ENTRIES
                    012702
                               000000
                                                               MOV.
                                                                         #ST4TBL,R2
                                                                                                        :R2.-> TABLE:
:LOOK:FOR:REG:MNEMONIC
      89
          000132
                                                               CALL
                                                                         SCAN
      90
91
92
          000136
                     103004
                                                              BCC.
CALL
                                                                         4$
                                                                                                         :OK, CONTINUE
          000140
                                                                         FRRE
          000144
                    000167
                               000114
                                                                         ST4X
      93
      94
95
96
                                                              SAVE-THE-POINTER-TO-THE-ROUTINE-ASSOCIATED WITH-THE-REGISTER, R1 -> ROUTINE-ADDRESS.
CALL-ROUTINE TO-SCAN-COMMAND-LINE-FOR-LOOP INDICATOR.
      97
                                                                   PP>ST-0 CR-L
      98
99
                                                              LOOP-FLAG-WILL-BE-SET-IF-INDICATOR-IS-PRESENT.
JUMP-TO-ROUTINE-TO-LOAD-REGISTER.
     100
     101
          000150
                    010167
                               000000G
                                                    4$:
                                                               MOV.
                                                                         R1, RTHPT
                                                                                                         ;SAVE POINTER TO RTH
     102
          666154
                                                              CALL
MOV:
                                                                         LOOPR RTHPT R1
                                                                                                         ;LOOP?
     103
          000160
                     016701
                                                    ST4IN:
                                                                                                         ; POINT - TO - ROUTINE
          000164
     104
                                                                                                                                                               MOTHER AND
                    000171
                                                                         @(R1)
                                                                                                         : EXECUTE · ROUTINE ·
     105
     106
     187
                                                              PPS-CONTROL-REGISTER
     108
     109
          000170
                                                    ST4CR::
     110
          000170
                    016746
                               000000G
                                                              MOV
                                                                         BINWD,-(SP)
PPCR
                                                                                                         :DATA FOR LOD BUS REG
     111
          999174
                                                               CALL
                                                                                                        :WRITE TO CONTROL DEC
         000200
                    000423
     112
                                                              BR
                                                                         ST4LP
     113
    114
                                                              QCL POINTER
                                           Approved For Release 2005/07/12
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10 M1110 27-MAR-80 15:25 PAGE 5-2 Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3 PPREST-115 116 000202 117 000202 ST40P:: 016746 ;WORD·FOR·QCL·POINTER· ;LOAD·QCL·POINTER· ;TEST·FOR·LOOP· 000000G MOV. BINUD,-(SP) 118 000206 CALL BR STOP ST4LP 119 000212 000416 120 121 122 LOAD MASK REGISTER 123 000214 ST4MR:: 124 125 126 000214 000220 012746 000052 MOV-:MASK-REGISTER-SELECT-FOR-PP-CR-:LOAD-PP-CONTROL-REG :WORD-FOR-MASK-REGISTER-:SEND-MASK WORD-#0\$MR,-(SP) CALL PPCR 000224 016746 000000G MOV. BINWD, - (SP) 127 000230 LBPSC ST4LP CALL 128 · 000234 129 000405 :TEST-FOR-LOOP 130 LOAD PPS Q+REG 131 132-000236 133-000236 ST4QR:: 016746 ;WORD·FOR·Q-REG ;STORE·IT· 0000000 MOV. BINWD,-(SP) 134 000242 CALL QREG 135 136 000246 000400 BR ST4LP ; TEST-FOR-LOOP 137 138 000250 139 000250 140 000256 #LOOP,BASE 032767 000000G-000000G BIT. :REPEAT ? 001402 000167 ST4X :NO, EXIT-000260 177674 JMP. ST4IN 142 143 000264 ST4X: 144 000264 CALL: KILL 000167 000000G JMP. PPSXX-

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PPREST- MACRO-M1110 27-MAR-80 15:25
                                                                                                                                      :25 PAGE 6
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                 147
                 148
                 149
                 150
                                                                                                                                                                                                PERFORM THIRD LEVEL PARSING
EG. IN THE COMMAND:
PP>RE CR
                 151
152
                                                                                                                                                                                                PARSE - THE - 1 CR 1
                 154
                 155
                               000274
                 156
                                                                                                                                                                RE4::
                                000274
                                                                                                                                                                                                                                                                                                                               ;LOCATE · A · REG · MNEMONIC ·
                  158
                               000300
                                                                                                                                                                                                BCC -
                                                                                                                                                                                                                                15
                                                                                                                                                                                                                                                                                                                                                                                                                      1.187.
                 159
                               000302
                                                                                                                                                                                                                               ÉRR4
                                                                                                                                                                                                CALL:
                 160 000306
                                                                000167 000164
                                                                                                                                                                                                                               RE4X
                 161
                 162
                                                                                                                                                                                                MATCH:THE:REGISTER:MNEMONIC:FROM THE:COMMAND:LINE:AGAINST:
                 163
                                                                                                                                                                                                THE TABLE OF VALID MNEMONICS
                 164
                  165
                               000312
                                                               012700
                                                                                                000001
                                                                                                                                                                15:
                                                                                                                                                                                                MOV
                                                                                                                                                                                                                                #RE4LH,R0
                                                                                                                                                                                                                                                                                                                              **NUMBER OF TABLE ENTRIES ** R2 --> TABLE **
**LOOK FOR REG MNEMONIC. **
                               000316
                                                                012702
                                                                                                                                                                                                MOV.
                                                                                                                                                                                                                                #RE4TBL,R2
                 167
                               000322
                                                                                                                                                                                                                               SCAN
                                                                                                                                                                                                CALL
                 168
                               000326
                                                                103004
                                                                                                                                                                                                BCC.
                                                                                                                                                                                                                               2$
                                                                                                                                                                                                                                                                                                                               OK, CONTINUE.
                                                                                                                                                                                                                                                                                                                                                                                                - vie
                 169 000330
                                                                                                                                                                                                CALL
                                                                                                                                                                                                                               ERR6
                 176
                               000334
                                                                000167
                                                                                               000136
                                                                                                                                                                                                JMP -
                                                                                                                                                                                                                               RE4X
                                                                                                                                                                                                                                                                                                                                                     esteria con Paris III de la constante de la co
                171
172
                                                                                                                                                                                              SAVE THE POINTER TO THE ROUTINE ASSOCIATED WITH THE REGISTER, R1 -> ROUTINE ADDRESS;
CALL ROUTINE TO SCAN COMMAND LINE FOR LOOP INDICATOR.
EG. PP.RE-CR L
LOOP-FLAG WILL BE SET IF INDICATOR IS PRESENT.
                                                                                                                                                                                                JUMP . TO . ROUTINE . TO . READ . REGISTER.
                 178
                 179
                               000340
                                                               010167
                                                                                               000000G
                                                                                                                                                                                                                               RIGRINET
                                                                                                                                                                                                                                                                                                                              :SAVE · POINTER · TO 京前
                 180
                              600344
                                                                                                                                                                                                                                                                                                                          LOOP?

-- ROINT TO ROUTINE A

SEXECUTE ROUTINE!
                                                                                                                                                                                                CALL
                                                                                                                                                                                                                               LOOPR-
                               000350
                                                               016701
                                                                                               имимияс.
                                                                                                                                                               RE4IN:
                                                                                                                                                                                              MOV:
                                                                                                                                                                                                                               RTHPT, R1
                                                               000171
                                                                                               000000
                                                                                                                                                                                                JMP
                                                                                                                                                                                                                               @(R1)
                 183
                                                                                                                                                                                                                                                                                                                                                    184
                 185
                                                                                                                                                                                                STATUS WORD
                 187
                               000360
                                                                                                                                                               RE4SW::
                                                               012746
052716
                 188
                               000360
                                                                                                001001
                                                                                                                                                                                                                                #<Q$LBD+Q$LBP>,~(SP)
                                                                                                                                                                                                                                                                                                                              CLEAR DRIVE AND PULSE
CLEAR SELECT BITS
SET NO-CLOCKS
                                000364
                                                                                                000360
                                                                                                                                                                                               BIS.
                                                                                                                                                                                                                                #Q$CSEL,(SP)
                 190
                               000370
                                                                012746
                                                                                                176000
                                                                                                                                                                                               MOV
                                                                                                                                                                                                                               #D$NCLK,-(SP)
                 191
                               000374
                                                                052716
                                                                                                000320
                                                                                                                                                                                                                                                                                                                              READ PPS STATUS WORD
                                                                                                                                                                                                BIS
                                                                                                                                                                                                                                #Q$PPSW,(SP)
                               000400
                                                                                                                                                                                                CALL
                                                                                                                                                                                                                               CSR1
                 193
                               000404
                                                                016701
                                                                                                176424
                                                                                                                                                                                              MOV.
                                                                                                                                                                                                                               OR$LBR,R1
                 194
                               000410
                                                                                                                                                                                              BIC
                                                                                                                                                                                                                                                                                                                               :CLEAR-ALL BITS-EXCEPT-LOW-3
                                                                                                                                                                                                                               #177774,R1
                 195
                 196
                               000414
                                                               012746
                                                                                               000320
                                                                                                                                                                                              MOV.
                                                                                                                                                                                                                               #Q$PPSW,-(SP)
                                                                                                                                                                                                                                                                                                                              :CLEAR · PP · STATUS · REQUEST · SET · NOTHING ·
                  197
                               000420
                                                               005046
                                                                                                                                                                                              CLR.
CALL
                                                                                                                                                                                                                                -(SP)
                               000422
                 198
                                                                                                                                                                                                                               CSR1
                               000426
                                                               000400
                                                                                                                                                                                               BR
                                                                                                                                                                                                                               RE4PUT
                                                                                                                                                                                                                                                                                                                              :PRINT-AND TEST-LOOP FLAG-
                200
                                                                                                                                                                                                                                                                                                                                                   TED. ONDE 2
               201
                                                                                                                                                               RE4PUT:
               203 000430
                                                                                             000000G-000000G-
                                                                                                                                     #0000G #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #000 #0000 #0000 #000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #
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5-25 PAGE For Release 2005/07/1 CIA-RDP85-00514R000200020001-3 204 000436 001011 YES, SKIP PRINT.
SET-FLAG FOR PRINTED ONCE
POINT TO PRINT LINE
CONVERT VALUE IN RI FOR PRINTING. BNE -205 000440 206 000446 052767 000000G · 000000G BIS. #ONCE, BASE 012705 000000G #PRINT, R5 UNPK MOV-207 000452 CALL

PPREST-

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PPREST MACRO M1110 27-MAR-80 15:25 Proved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
          249
          220
221
222
223
                                                                                                       3
                                                                                                       ;
                                                                                                                           ERASE
                    000514
                                                                                                       FR4::
          224
                    000514
                                                                                                                                                FIND
                                                                                                                           CALL
BCC+
                                                                                                                                                                                                              :FIND A NON-BLANK IN COMMAND LINE
          225
                    000520
                                         103004
                                                                                                                                                                                                              OK, CONTINUE
NOTHING THERE
RETURN TO TOP OF LOOP (PROMPT)
                                                                                                                                                15
          226
                    000522
                                                                                                                           CALL
                                                                                                                                                ERR4
          227
                    000526
                                         000167
                                                             000524
                                                                                                                           JMP.
                                                                                                                                                ER4X
          229
230
                    000532
                                         012700
                                                                                                       1$:
                                                                                                                           MOV
                                                                                                                                                 #ER4LN,R0
                                                                                                                                                                                                              ; NUMBER OF TABLE ENTRIES
                    000536
                                         012702
                                                             000024
                                                                                                                           MOV
                                                                                                                                                 #ER4TBL,R2
                                                                                                                                                                                                             ;R2·-> TABLE·
;LOOK·FOR·MNEMONIC
           231
                    000542
                                                                                                                           CALL
                                                                                                                                                SCAN
          232 000546
233 000550
234 000554
                                          103004
                                                                                                                           BCC:
                                                                                                                                                2$
                                                                                                                                                                                                              OK, CONTINUE
                                                                                                                           CALL
                                                                                                                                                ERR6
                                         000167
                                                              000476
                                                                                                                            JMP
                                                                                                                                                ER4X
           235
           236
                     000560
                                         010167
                                                              000000G
                                                                                                       2$:
                                                                                                                           MOV.
                                                                                                                                                R1.RTHPT
                                                                                                                                                                                                              ;SAVE · POINTER · TO · RTN
          237
                    000564
000570
                                                                                                                           CALL
                                                                                                                                                LOOPR
           238
                                         016701
                                                              000000G
                                                                                                       ER4IN:
                                                                                                                           MOV
                                                                                                                                                RTHPT, R1
                                                                                                                                                                                                              :POINT TO ROUTINE
           239
                     000574
                                         000171
                                                             000000
                                                                                                                            IMP.
                                                                                                                                                @(R1)
                                                                                                                                                                                                              :EXECUTE ROUTINE
          240
          241
          242
243
                                                                                                                           GLEAR · FAL · COUNTERS
          244
245
                    000600
                                                                                                       ER4FC::
           246
                    000600
                                         012746
                                                             001001
                                                                                                                                                                                                             :CLEAR DRIVE AND PULSE
:CLEAR SELECTION BITS
                                                                                                                            MOV
                                                                                                                                                 #<Q$LBD+Q$LBP>,-(SP)
           247
                     000604
                                         052716
                                                             000360
                                                                                                                           BIS
                                                                                                                                                #Q$CSEL,(SP)
           248
                    000610
                                         012746
                                                              176000
                                                                                                                           MOV
                                                                                                                                                #O$NCLK,-(SP)
                                                                                                                                                                                                              :SET-NO-CLOCKS
          249
                                                                                                                           CALL
                                                                                                                                                CSR1
          250
251
                                                                                                                           TURN-ON-PPS-CLOCKS
          252
                                                                                                       ;
          253
                    000620
                                         012746
                                                             РИВЕРРИ
                                                                                                                           MOV.
                                                                                                                                                #Q$RNC,-(SP)
                                                                                                                                                                                                             :CLEAR PPS NO-CLOCKS (START PPS)
          254
255
                     000624
                                         005046
                                                                                                                           CLR:
                                                                                                                                                 -(SP)
                     000626
                                                                                                                           CALL
                                                                                                                                                CSR4
          256
          257
258
259
                                                                                                                            SET-PPS-CONTROL-REGISTER
          260
261
                    000632
000636
                                         012746
                                                             000025
                                                                                                                           MOV
                                                                                                                                                 #025,-(SP)
                                                                                                                                                                                                              :SET.PPCR - = . X: 15'
                                                                                                                           CALL
                                                                                                                                                PPCR
          262
          263
                                                                                                                           SET-LOD-BUS-REGISTER = 0
SET-LOD-BUS-DRIVE, SELECT-PPS
          264
          265
           266
                     000642
                                         005067
                                                              176424
                                                                                                                           GLR
CLR
                                                                                                                                                ORSI BR
          267
                    000646
                                         005046
                                                                                                                                                -(SP)
                                                                                                                                                                                                               :CLEAR · NOTHING
          268
                    000650
                                         012746
                                                             001300
                                                                                                                           MOV
                                                                                                                                                #<Q$PP2+Q$LBD>,-(SP)
                                                                                                                                                                                                              :SELECT-PPS-AND-SET-DRIVE
                    000654
                                                                                                                           CALL
                                                                                                                                                CSR I
         270
271
272
                                                                                                                           SET-FAL-LOD-ON, SET-LOD-BUS-REG, TURN-FAL-LOD-OFF
                                                                                                                                                                                                                     THAT THE PARTY OF 
          273
                    000660
                                         012767
                                                             004000
                                                                                  176422
                                                                                                                           MOV
                                                                                                                                                #Q$FAL,QR$CR2
                   000666
         274
                                         012767
                                                                                                                           MOV
                                                                                                                                                #077777,QR$LBR
                                                                                                                                                                                                              :WRITE . 'FAL PARK'
                                                                                                                                                                                                                                                            TO LOD
                                        005067
```

CIA-RDP85-00514Rbb0200020001-3

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275

000674

176422

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RO M1110 27-MAR-80 15 Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
PPREST-
    276
277
278
279
                                                       WAIT-2-MS-FOR-FAL-TO-FINISH
                                                      ADD -= -3.17US
DEC -= -2.65US
    280
                                                       BNE - - 1.87US
    281
    282.000700
                  912791
                           000454
                                                                #300..R1
                                                                                            :EXECUTE:300
    283 000704
                  005000
                                                       CLR
                                                                RØ
                                                                                            ; ADD - NOTHING
    284 000706
                  060000
                                                                RØ.RØ
                                              1$:
                                                       ADD
    285
286
287
        000710
000712
                  005301
                                                                R1
                                                       DEC
                  001375
                                                                1$
    288
289
                                                       GLEAR · LOD · BUS · DRIVE . DESELECT · PPS ·
    290
        000714
                  012746
                           001300
                                                       MOV
                                                                #<Q$PP2+Q$LBD>,-(SP)
                                                                                            :CLEAR · DRIVE · AND · DESELECT ·
         000720
                  012746
                           176000
                                                       MOV.
                                                                #Q$NCLK,-(SP)
                                                                                            :SET-NO-CLOCKS
    292.000724
                                                       CALL
                                                                CSR4
    293
    294
                                                       GLEAR · PP · CR
    295
    296
         000730
                  012746
                           000040
                                                       MOV.
                                                                #Q$CLR,-(SP)
                                                                                            :CODE · FOR · CLEAR
    297
        000734
                                                       CALL
                                                                PPCR
    298
                  000167
        888748
                           000312
                                                                ER4X
    300
    301
302
                                                       CLEAR · QLB · REFERENCE · PAGE
    303
    304
        000744
                                              ÉR4QR∷
    305
        000744
                  012746
                           001001
                                                       MOV-
                                                                #<Q$LBD+Q$LBP>,-(SP)
                                                                                            ;CLEAR · DRIVE · AND · PULSE
    306
        000750
                  052716
                                                                                            :CLEAR SELECTION BITS
                           000360
                                                       BIS.
                                                                #Q$CSEL,(SP)
                  012746
                           176000
                                                       MOV.
                                                                #Q$NCLK,-(SP)
                                                                                            :SET-NO-CLOCKS
    308
        000760
                                                       CALL
                                                                CSR1
    309
    310
                                                       TURN - ON - PPS - CLOCKS
    311
    312-000764
                  012746
                                                       MOV.
                                                                #Q$RNC,-(SP)
                                                                                            :CLEAR PPS NO-CLOCKS (START PPS)
    313
314
        000770
000772
                  005046
                                                                                            :SET-NOTHING-
                                                       CALL
                                                                CSR1
                                                                                                      77/07
    316
                                                       SET-PPS-CONTROL-REGISTER
    317
    318
        000776 012746
                           000141
                                                       MOV.
                                                                #141.-(SP)
                                                                                            :SET PPCR -- X'61'
    319
                                                       CALL
                                                                PPCR
    320
321
322
                                                       SET-LOD-BUS-REG-=-0
                                                       SET-LOD-BUS-DRIVE, SELECT-PPS
                                                                                                                                  7.77
    323
    324 00100E
                  005067
                           176424
                                                       GLR
                                                                QR$LBR
                                                                                            :SET.LBR. = 0
                                                                                            # SELECT PPS AND SET DRIVE
    325
        001012
                  005046
                                                      CLR -
                                                                -(SP)
         001014
                  012746
                           001300
                                                                #<Q$PP2+Q$LBD>.
    327
328
329
        001020
                                                       CALL
                                                       SET-LHP-START, THEN-CLEAR
                                                                                            :START LHP
    331 001024
                  012767
                           010000
                                                       MOV-
                                                                #Q$LHP,QR$CR2
    332-001032-005067 -176422
                                      Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
```

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PPREST MACRO M1110 27-MAR-80 15 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
           333
334
335
336
                                                                                                                                    WAIT-2-MS-FOR-LHP-TO-FINISH-
                                                                                                                                   ADD:=:3.17US
DEC:=:2.65US
BNE:=:1.87US
           337
338
339
                     001036
                                           012701
                                                                                                                                    MOV
                                                                                                                                                          #300.,R1
                                                                                                                                                                                                                           :EXECUTE 300 TIMES
           340
                    001042
                                           005000
                                                                                                                                    CLR
                                                                                                                                                         RØ
                                                                                                                                                                                                                           : ADD - NOTH ING
          341 001044
342 001046
                                            060000
                                                                                                              1$:
                                                                                                                                    \Delta {\rm DD}
                                                                                                                                                         R0.R0
                                            005301
                                                                                                                                    DEC
                                                                                                                                                         R4
           343
                     001050
                                           001375
                                                                                                                                   BNE
                                                                                                                                                         15
           344
           345
                                                                                                                                   GLEAR LOD BUS DRIVE, DESELECT PPS
           346
                     001052 012746
001056 012746
           347
                                                                  001300
                                                                                                                                   MOV
                                                                                                                                                         #<Q$PP2+Q$LBD>,-(SP)
                                                                                                                                                                                                                           :CLEAR · DRIVE · AND · DESELECT
            348
                                                                  176000
                                                                                                                                   MOV:
                                                                                                                                                         #Q$NCLK,-(SP)
                                                                                                                                                                                                                           :SET-NO-CLOCKS
            349
           350
351
352
                                                                                                                                   GLEAR - PP - CR -
           353 001066
354 001072
                                                                 000040
                                                                                                                                   MOV
                                                                                                                                                          #O$CLR,-(SP)
                                                                                                                                                                                                                           :CODE · FOR · CLEAR
                                                                                                                                   CALL
           355
356
357
358
                                                                                                                                                         PPCR
                    001076
                                           000167
                                                                 000154
                                                                                                                                                         ER4X
          359
360
361
362
                                                                                                                                   CLEAR · QLB · PAGES
                    001102
                                                                                                             ER400::
           363
                     001102
                                           005046
                                                                                                                                   CLR
                                                                                                                                                          -(SP)
                                                                                                                                                                                                                           :SELECT-PAGE-0
           364 001104
365 001106
                                                                                                                                   BR
                                                                                                                                                        PGSEL3
                                                                                                             ER401::
           366
367
                     001106
                                           R12746
                                                                  999991
                                                                                                                                                         #1,-(SP)
                                                                                                                                                                                                                          :SELECT-PAGE-1
                     001112
                                           000402
                                                                                                                                                        PGSEL3
           368
                     001114
                                                                                                             ER402::
           369 001114
                                           012746
                                                                 000002
                                                                                                                                   MOV
                                                                                                                                                         #2.-(SP)
                                                                                                                                                                                                                          :SELECT-PAGE-2-
           370
                     001120
                                                                                                            PGSEL3:
                                                                                                                                   CALL
                                                                                                                                                                                                                          :SELECT OLB PAGE : CLEAR DRIVE AND PULSE :CLEAR SELECTION BITS
          372-001124
373 001130
                                           012746
                                                                                                                                   MOV:
                                                                                                                                                         #<Q$LBD+Q$LBP>,-(SP)
                                          052716
012746
                                                                 000360
                                                                                                                                   BIS.
                                                                                                                                                        #Q$CSEL,(SP)
#Q$NCLK,-(SP)
                     001134
                                                                  176000
                                                                                                                                                                                                                          ;SET-NO-CLOCKS
          375
376
377
                    001140
                                                                                                                                   CALL
                                                                                                                                                        CSR1
                                                                                                                                   TURN · ON · PPS · CLOCKS
                                                                                                                                                                                                                          CLEAR PPS NO-CLOCKS (STAR PPS)
           378
           379
                     001144
                                           012746
                                                                 006000
                                                                                                                                   MOV
                                                                                                                                                         #Q$RNC,-(SP)
           388
                    001150
                                           005046
                                                                                                                                   CLR
                                                                                                                                                         -(SP)
                                                                                                                                                                                                                           :SET - NOTHING -
           381
                     001152
                                                                                                                                   CALL
                                                                                                                                                        CSR1
           383
                                                                                                                                   SET-PPS-CONTROL-REGISTER
           384
           385
                    001156
                                          012746 000155
                                                                                                                                   MOV.
                                                                                                                                                         #155,-(SP)
                                                                                                                                                                                                                           :SET.PPCR.=.X:6D:
                    001162
                                                                                                                                   CALL
                                                                                                                                                        PPCR
         387
                                                                                                                                                                                                                              TO THE THE THE TANK T
          388
                                                                                                                                   SET-LOD-BUS-DRIVE, SELECT-PPS-
         389
                                                                                           Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
```

AIDQR.TSK MRLD.

MEMORY ALLOCATION MARCH TERM APPROVED For Release 2005/07/1 CIA-RDP85-00514R000200020001-3

*** SEGMENT: MRLD.

R/W-MEM- LIMITS: 072364 073557 001174 00636. DISK-BLK-LIMITS: 000076 000077 000002.00002.

MEMORY-ALLOCATION-SYNOPSIS:

SECTION. .

TITLE . IDENT, FILE . .

MRLD.08J:1

#\$ALVC:(RW.I.GBL.REL.CON) 072364 000000 00000.

#RLD:(RW.I.LCL.REL.CON) 072364 001174 00636.

##\$ALVC:(RW.D.LCL.REL.CON) 073560 000000 00000.

##\$RTS::(RW.I.GBL.REL.CON) 071144 000002 000002.

GLOBAL SYMBOLS:

LDi- 072374-R- LDiLM- 000002 LD1MD- 073010-R- LD1MM- 072646-R- LD1TBL-072364-R-

MEMORY ALLOCATION MAR TKB 27-MAR-80 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3 AIDQR.TSK;7 MRPR .

*** SEGMENT: MRPR

R/W-MEM- LIMITS: 072364 073473 001110 00584. DISK-BLK-LIMITS: 000100 000101 000002.00002.

MEMORY-ALLOCATION-SYNOPSIS:

SECTION, -

TITLE . IDENT: FILE . .

BLK::(RW.I.LCL.REL.CON) 072364 000000 00000.

MRPR: (RW.I.LCL.REL.CON) 072364 001106 00582. 072364 001106 00582. MRPR \$\$ALVC: (RW.D.LCL.REL.CON) 073472 000000 00000.

\$\$RTS : (RW.I.GBL, REL.OVR) 071144 000002 00002.

MRPR.OBJ;1

GLOBAL SYMBOLS:

FR4 072374-R: PRILH: 000002 PRIMD: 073062-R: PRIMM: 072662-R: PRITBL:072364-R: AIDOR.TSK

MEMORY ALLOCATION MARDITURED FOR Release 2005/07/1 CIA-RDP85-00514R000200020001-3

*** SEGMENT: MRREST.

R/W-MEM- LIMITS: 072364 073657 001274 00700. DISK-BLK-LIMITS: 000102-000103 000002-00002.

MEMORY-ALLOCATION-SYNOPSIS:

SECTION, .

TITLE. IDENT, FILE.

BLK,:(RW.I,LCL,REL,GON) 072364 000000 00000.

MRREST: (RW.I,LCL,REL,CON) 072364 001274 00700.

\$\$ALVC:(RW.D.LCL.REL.CON) 072364 001274 00700 MRREST

\$\$RTS::(RW.I.GBL.REL.OVR) 071144 000002 00002.

GLOBAL SYMBOLS:

073546-R: RE1 072700-R LOCIP 073556-R REIDW 073024-R · 073016-R · LOCIS 073562-R REILN STIOR 072744-R LOCIW- 073566-R- REIMA-073150-R RS1 073516-R 072636-R ST1TBL 072364-R

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MEMORY ALLOCATION MAP TKB 27-MAR-80 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3 AIDQR.TSK;7 MRBUG -

*** SEGMENT: MRBUG

R/W-MEM- LIMITS: 072364 073353 000770 00504. DISK-BLK-LIMITS: 000104 000104 000001 00001.

MEMORY-ALLOCATION SYNOPSIS:

SECTION. .

TITLE . IDENT, FILE . .

BLK::(RW.I.LCL.REL.CON) 072364 000000 00000.
MRBUG::(RW.I.LCL.REL.CON) 072364 000766 00502.
072364 000766 00502.
072364 000766 00502.
MRBUG:
\$\$ALVC:(RW.D.LCL.REL.CON) 073352 000000 00000.
\$\$RTS::(RW.I.GBL.REL.OVR) 071144 000002 000002.

MRBUG.OBJ:1

GLOBAL SYMBOLS:

AT1 072364-R· GO1 072672-R: OF1 072472-R - SSI 972516-R AIDOR.TSK

MEMORY ALLOCATION MAP TKB 27-MAR-80 Approved For Release 2005/07/11 (A-RDP85-00514R000200020001-3

*** SEGMENT: CA ...

R/W-MEM- LIMITS: 072014 073517 001504 00836. DISK-BLK-LIMITS: 000105 000106.000002.00002.

MEMORY-ALLOCATION-SYNOPSIS:

SECTION, .

TITLE . IDENT: FILE . .

BLK::(RW.I,LCL,REL,GON) 072014 000000 00000. (RW.I.LCL.FEL.CON) 072014 001312 00714.

\$\$ALVC:(RW.D.LCL.REL.CON) 073326 000170 00120. \$\$RTS::(RW.I.GBL.REL.OVR) 071144 000002 00002.

CP.OBJ;1

GLOBAL SYMBOLS:

AT2 073326-R · CPXX · 072112-R · FR2 073426-R · GO2 073446-R BCL 073346-R REREG 073476-R RE2 073324-R SS2 073436-R ST2 CL2 073376-R 073456-R 073144-R: HLB 073356-R 073366-R

MEMORY ALLOCATION MAP TKB 27-MAR-80 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3 AIDQR.TSK;7 CPBUG1

*** SEGMENT: CFBUG1:

R/W-MEM- LIMITS: 073520 074373 000654 00428. DISK-BLK-LIMITS: 000107 000107 000001 00001.

MEMORY-ALLOCATION SYNOPSIS:

SECTION. . TITLE . IDENT FILE .

BLK::(RW.I.LCL.REL.CON) 073520 000000 00000.

CPBUG1:(RW.I.LCL.REL.CON) 073520 000654 00428.

073520 000654 00428.

CPBUG1

\$\$ALVC:(RW.D.LCL.REL.CON) 074374 000000 00000.

\$\$RTS::(RW.I.GBL.REL.OVR) 071144 000002.00002. CPBUG1.0BJ;1

GLOBAL SYMBOLS:

ĤT2 073524-R: LR2 073656-R · 0F2 · 073632+R - PC2 -074010-R: RG2: 074072-R

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AIDQR.TSK CPBUG2

MEMORY ALLOCATION MAR TYPE Ved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3

*** SEGMENT: CPBUG2

R/W-MEM- LIMITS: 073520 076167 002450 01320. DISK-BLK-LIMITS: 000110 000112 000003 00003.

MEMORY-ALLOCATION SYNOPSIS:

SECTION, .

TITLE . IDENT, FILE . .

BLK::(RW,I,LCL,REL,GON) 073520 000000 00000.

CPBUG2:(RW,I,LCL,REL,CON) 073520 002450 01320.

073520 002450 01320.

073520 002450 01320.

CPBUG2:

\$\$ALVC:(RW,D,LCL,REL,CON) 076170 000000 00000.

\$\$RTS::(RW,I,GBL,REL,OVR) 071144 000002 00002.

CPBUG2.OBJ;1

GLOBAL SYMBOLS:

FR2· 074510-R: GO2 073656-R

MEMORY ALLOCATION MAP TKB PAGE 12 27-MAR-80 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3 AIDQR.TSK;7 CPREST-

*** SEGMENT: CPREST

R/W-MEM- LIMITS: 073520 075327 001610 00904. DISK-BLK-LIMITS: 000113 000114 000002 00002.

MEMORY-ALLOCATION-SYNOPSIS:

SECTION. . TITLE . IDENT: FILE . . BLK::(RW.I,LCL,REL,GON) 073520 природа природа CPREST: (RW.I.LCL, REL.CON) 073520 001606 00902.

073520 001606 00902. CPREST.

075152-R

075146-R

CPREST.OBJ:1 \$\$ALVC:(RW.D.LCL.REL.CON) 075326 000000 000000. \$\$RTS::(RW.I.GBL.REL.OVR) 071144 000002.00002.

RE2TBL RS2

073664-R ·

075266-R:

RE2R2

RE2R3

GLOBAL SYMBOLS:

075112+R

RE2RA

974564-R 974560-R CL2· RE2 075316-R 075102-R 075142-R ST2 07400A-R-ST2PB 074302-R· ST2RF 074524-R ST2R7 074664-R-RE2RD 075076-R RE2R5 075136-R ST2BK 074134-R ST2PC 074620-R 074614-R 074334-R ST2R0 ST2R8 RE2DD 075034-R 075072-R RE2RE RE2R6 075132+R ST2CR 074120-R ST2PD 074366-R ST2R1 ST2R9 .074554-R RE2LH 000023 RE2RF 075066-R RE2R7 075126-R ST2DA ST2DD 074420-R · 074462+R · ST2RA 074550-R ST2R2 074610-R ST2TBL 073520-R RE2MA 074750-R: 075162-R RE2R8 075122-R ST2RB 974544-P 075000-R: RE2MP RE2R1 075156-R RE2R9 075116-R ST2LN 000031 ST2RC 074540-R ST2R4 ST2R5 074600-R

ST2MA

ST2PA

074160-R

074250-R:

ST2RD

ST2RE

074534-R

074530-R·

ST2R6

074574-R

074570-R

The text of the particular partic

CPLD

MEMORY ALLOCATION MAP TKB Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3

*** SEGMENT: CPLD ...

R/W-MEM- LIMITS: 073520 075407 001670 00952. DISK-BLK-LIMITS: 000115 000116 000002-00002.

MEMORY-ALLOCATION SYNOPSIS:

SECTION.

TITLE . . IDENT: FILE . .

.BLK::(RW.I.L.L.REL.CON) 073520 000000 00000. CPLD::(RW.I.L.L.REL.CON) 073520 001670 00952.

973520 001670 00952. CPLD-\$\$ALVC:(RW,D,LCL,REL,CON) 075410 000000 00000. \$\$RTS::(RW,I,GBL,REL,OVR) 071144 000002.00002.

GLOBAL SYMBOLS:

073540-R: LD2BL: 074634-R: LD2GD: 074212-R: LD2GS: 074012-R: LD2HL 074454-R: LD2LN LD2. 000004 LD2TBL · 073520-R

CPLD.OBJ:1

AIDQR.TSK;7 CPPR -

MORY ALLOCATION MAP TKB 27-MAR-80 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3

*** SEGMENT: CHPR.

R/W-MEM- LIMITS: 073520 075303 001564 00884. DISK-BLK-LIMITS: 000117 000120 000002 00002.

MEMORY-ALLOCATION SYNOPSIS:

SECTION. .

TITLE . . IDENT, FILE . .

BLK::(RW,I,LCL,REL,CON) 073520 000000 00000.

CPPR : (RW, I, LCL, REL, CON) 073520 001564 00884.

\$\$ALVC:(RW,D,LCL,REL,CON) 071344 000002 00000. \$\$RTS::(RW,I,GBL,REL,OVR) 071144 000002 00002.

CPPR.OBJ;1

GLOBAL SYMBOLS:

PB2+ 074764-R+ PB2HB+ 075034-R+ PB2LN+ 000003 PR2+ PB2BL+ 075220-R+ PB2HL 075126-R+ PB2TBL 073530-R+ PR2CD 074032-R##PR2TBL 073520-R 073544-R: PR2CS 074352-R PR2LN 000002

AIDOR.TSK

MEMORY ALLOCATION MAP TKB 27-MAR-80 Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3

*** SEGMENT: BCE . . .

R/W-MEM- LIMITS: 072014 072647 000634 00412. DISK-BLK-LIMITS: 000121 000121 000001 00001.

MEMORY-ALLOCATION-SYNOPSIS:

SECTION. .

TITLE . IDENT: FILE . .

. BLK::(RW.I.LCL.REL.CON) 072014 000000 00000. BCE::(RW.I.LCL.REL.CON) 072014 000164 00116. 072014 000164 00116.

000164 00116. BCE BCREST:(RW.I.LCL.REL.CON) 072200

BCE:OBJ:1 000446 00294. BCREST, OBJ; 1

\$\$ALVC:(RW,D,LCL,REL,CON) 072646 00000 00000. \$\$RTS::(RW,I,GBL,PEL,OVR) 071144 000002 00002.

GLOBAL·SYMBOLS:

BCE-- 072030-R RE301 3CEXX 072110-R RE302 072510-R: RE3LN: 000003 072516-R: RE3TBL 072214-R: 072524-R: RS3 072616-R: ST3 072230-R ST3LB 072370-R ST3C1 072350-R ST3LN. 000003 ĸ£3 072424-R: RE3LB ST302. 072360-R ST3TBL 072200-R

MEMORY ALLOCATION MAP TKB PAGE 16 27+MAR-80 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3 AIDQR.TSK:7

*** SEGMENT: PPS . . .

R/W-MEM- LIMITS: 072014 072567 000554 00364. DISK-BLK-LIMITS: 000122 000122 000001 00001.

MEMORY-ALLOCATION-SYNOPSIS:

SECTION. .

TITLE . IDENT . FILE . .

BLK::(RW,I,LCL,REL,CON) 072014 000000 00000. PS::(RW,I,LCL,REL,CON) 072014 000464 00308.

072014 000464 00308, PPS \$\$ALVC:(RW.D.LCL.REL.CON) 072500 000070 00056, \$\$RTS::(RW.I.GBL.REL.OVR) 071144 000002 00002.

PPS.OBJ:1

GLOBAL SYMBOLS:

072520-R: ER4 072530-R. PPPR4 072510-R. PPSXX. 072132-R. QREG 072222-R 072360-R CODE 072050-R· LD4 072500-R PPS 072052-R: PS4 072540-R: RE4 072550-R ST4 072560-R

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AIDOR.TSK

MEMORY ALLOCATION MAP TKB 27-MAR-80 Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3

*** SEGMENT: PPLD ...

R/W-MEM- LIMITS: 072570 075233 002444 01316. DISK-BLK-LIMITS: 000123 000125 000003 00003.

MEMORY-ALLOCATION-SYNOPSIS:

SECTION.

TITLE . IDENT: FILE . .

PPLD.OBJ:1

BLK::(RW,I,LCL,REL,CON) 072570 000000 00000.
PPLD::(RW,I,LCL,REL,CON) 072570 002444 01316.
072570 002444 01316.
9\$ALVC:(RW,D,LCL,REL,CON) 075234 00000 00000.
\$\$RTS::(RW,I,GBL,REL,CON) 071144 000002 00002.

GLOBAL SYMBOLS:

小型以为 · 例 (1) AIDQR.TSK;7 MEMORY ALLOCATION MARDITOVED For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3 PPPR.

*** SEGMENT: PPPR

R/W-MEM- LIMITS: 072570 075167 002400 01280. DISK-BLK-LIMITS: 000126 000130 000003 00003.

MEMORY-ALLOCATION-SYNOPSIS:

SECTION.

TITLE . IDENT: FILE . .

.BLK::(RW,I,LCL,REL,CON) 072570 000000 000000. PPPR::(RW,I,LCL,REL,CON) 072570 002400 01280.

972570 002400 01280. \$\$ALVC:(RW.D.LCL.REL.CON) 075170 000000 000000. 01280. PPPR \$\$RTS::(RW.I.GBL.REL.OVR) 071144 000002 00002.

PPPR.OBJ;1

GLOBAL SYMBOLS:

PPR4 072644-R: PR4F0: 074166-R: PR4LN: 000044 PR4QR: 074344-R: PR4Q0 074534-R: PR4Q2 074550-R PR4FC: 074156-R: PR4FP: 074146-R: PR4QL: 073142-R: PR4QW: 073132-R: PR4Q1 074542-R: PR4TBL: 072570-R

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MEMORY ALLOCATION MAP TKB 27-MAR-80 Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3

*** SEGMENT: PPREST.

R/W-MEM- LIMITS: 072570 074167 001400 00768. DISK-BLK-LIMITS: 000131 000132 000002 00002.

MEMORY-ALLOCATION-SYNOPSIS:

SECTION, ..

TITLE . IDENT: FILE . .

. BLK.:(RW.I.LCL.REL.CON) 072570 000000 00000.
PPREST:(RW.I.LCL.REL.CON) 072570 001376 00766.
072570 001376 00766. PPREST

\$\$ALVC:(RW.D.LCL.REL.CON) 074166 000000 000000. \$\$RTS::(RW.I.GBL.REL.OVR) 071144 000002.00002.

PPREST.OBJ;1

GLOBAL SYMBOLS:

074156-R. ER4LN. 000005 ER4Q1 073676-R. PS4 073304-R. ER4QR. 073534-R. ER4Q2. 073704-R. RE4 CL4 074072-R: RE4SW: 073150-R: ST4CR 072760-R ST4QP · 072772-R · 073064-R: RE4TBL:072610-R: ST4LN ST40R 073026-R ER4FC: 073370-R: ER4Q0 073672-R: ER4TBL 072614-R: RE4LN: 000001 ST4 072640-R: ST4MR 073004-R ST4TBL - 072570-R -

MEMORY ALLOCATION MAP TKB 27-MAR-80 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3 AIDQR.TSK;7 SP.

*** SEGMENT: SF . . .

R/W-MEM- LIMITS: 072014 072573 000560 00368. DISK-BLK-LIMITS: 000133 000133 000001 00001.

MEMORY ALLOCATION SYNOPSIS:

SECTION. .. TITLE . IDENT: FILE . .

BLK::(RW,I,LCL,REL,CON) 072014 000000 00000. -::(RW,I,LCL,REL,CON) 072014 000172 00122.

072014 000172 00122. SP SP:OBJ:1

SPSUB : (RW. I.LCL.REL.CON) 072206 000324 00212. \$\$ALVC:(RW.D.LCL.REL.CON) 072230 000324 00212: \$\$ALVC:(RW.D.LCL.REL.CON) 072532 000040 00032. \$\$RTS::(RW.I.GBL.REL.OVR) 071144 000002 00002. SPSUB. SPSUB.OBJ:1

GLOBAL SYMBOLS:

CL5. 072552-R: LBSP: 072206-R: LD5 SPCP. 072542+R SPSXX 072116-R 072034-R: LBSSC: 072304-R: PS5 CODE -SPLB. 072402-R - SPS -

AIDQR:TSK SPLD.

MEMORY ALLOCATION MAP TKB 27-MAR-80 Approved For Release 2005/07/11 CIA-RDP85-00514R000200020001-3

*** SEGMENT: SPLD . . .

R/W-MEM- LIMITS: 072574 073647 001054 00556. DISK-BLK-LIMITS: 000134 000135 000002 00002.

MEMORY-ALLOCATION SYNOPSIS:

SECTION

TITLE . IDENT: FILE . .

##RTS::(RW.I.GBL.REL.ON) 072574 000000 00000.

##RTS::(RW.I.LCL.REL.CON) 072574 001052 00554.

##RTS::(RW.I.GBL.REL.CON) 073646 000000 00000.

##RTS::(RW.I.GBL.REL.OVR) 071144 000002 00002.

SPLD.OBJ:1

GLOBAL SYMBOLS:

MEMORY ALLOCATION MAROPTOVEd For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3 AIDOR.TSK;7

*** SEGMENT: SPPR

R/W-MEM- LIMITS: 072574 073547 000754 00492. DISK-BLK-LIMITS: 000136 000136 000001 00001.

MEMORY-ALLOCATION-SYNOPSIS:

SECTION, ..

TITLE · IDENT · FILE, ·

.BLK::(RW.I.LCL.REL.CON) 072574 000000 00000 SPPR::(RW.I.LCL.REL.CON) 072574 000752 00490.

\$\$ALVC:(RW.D.LCL.REL.CON) 073546 000000 000000. \$\$RTS::(RW.I.GBL.REL.OVR) 071144 000002 00002.

SPPR.OBJ;1

GLOBAL SYMBOLS:

PR5LN- 000030 PR50R- 073132-R- PR5SR- 073142-R- PR5S2- 073274-R- SPPR5 072624-R- PR5QB- 073122-R- PR5QX- 073112-R- PR5S1 073264-R- PR5TBL-072574-R-

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AIDOR.TSK SPREST.

MEMORY ALLOCATION MAP TKB Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3

*** SEGMENT: SPREST

R/W-MEM- LIMITS: 072574 072613 000020 00016 DISK-BLK-LIMITS: 000137 000017 000001 00001.

MEMORY-ALLOCATION SYNOPSIS:

SECTION. . .

TITLE. IDENT: FILE.

BLK::(RW.I,LCL,REL,CON) 072574 000000 00000.

SPREST:(RW.I,LCL,REL,CON) 072574 000020 00016.

072574 000020 00016.

\$\$ALVC:(RW,D,LCL,REL,CON) 072614 000000 00000.

\$\$RTS::(RW,I,GBL,REL,OVR) 071144 000002 000002.

SPREST.OBJ:1

GLOBAL · SYMBOLS:

072604-R: PS5 072574-R:

*** TASK BUILDER STATISTICS:

TOTAL-WORK-FILE-REFERENCES: 70839.
WORK-FILE- READS: 0.
WORK-FILE-WRITES: 0.
SIZE-OF-CORE-POOL: 15082. WORDS-(58. PAGES)
SIZE-OF-WORK-FILE: 13568. WORDS-(53. PAGES)

ELAPSED TIME:00:00:54

390 001166 391 001170 392 001174 393	005046 012746	001300		GER: MOV: CALL:	–(SP) #KQ\$PP2+Q\$LBD>,−(SP) CSR1	:GLEAR·NOTHING. :SELECT·PPS·AND·SET·DRIVE
394 395			:	SET·LH	P.START, THEN.CLEAR.	
396 001200			76422	MOV.	#Q\$LHP,QR\$CR2	चरः कृषः ≉START-LHP
397 001206 398	005067	176422		CLR.	QR\$CR2	;CLEAR
399			;		·MS·FOR·LHP·TO·FINISH·	
400 401				ADD:=:		
402			;	BNE -= -		
403 404 001212	012701	000454	;	MOV.	#700 B4	Ão
405 001216	005000	000434		CLR.	#300.,R1 R0	EXECUTE 300 TIMES ADD NOTHING
406 00122 0 407 001222	060000		1\$:	ADD.	R0.R0	ALLE THE THE STATE OF THE STATE
408 001224				DEC: BNE:	R1 1s	- W. H
409	00.0.0		;			
410 411				CLEAR.	LOD-BUS-DRIVE, DESELECT	·PPS·
412-001226			,	MOV.	# <q\$pp2+q\$lbd>(SP)</q\$pp2+q\$lbd>	:CLEAR · DRIVE · AND · DESELECT
413 001232- 414 001236	012746	176000	*	MOV.	#Q\$NCLK,-(SP)	SET NO-CLOCKS
415			:	CALL.	CSR1	
416 417				CLEAR:	PP·CR·	
417 418 001242	012746	000040	;	MOV.	#Q\$CLR,-(SP)	. CORE FOR OUT A
419 001246		0000 10		CALL	PPCR	;CODE·FOR·CLEAR·
420 001252- 421	000167	000000		JMP.	ER4X .	
422						
423 001256			ÉR4>			
424 001256 425 001264	032767 001402	000000G · 0	100000G	BIT: BEO:	#LOOP,BASE	:LOOP ON ERASE
426 001266	0001462	177276		JMP.	1\$ ER4IN:	;NO: ;REPEAT:ERASE:
427			; .		,	
428 001272 429 001276	000167	000000G	1\$:	CALL JMP	KILL PPSXX:	;KILL-AST-
	000101	0000000		OLIE.	LLOVV.	·

PPREST MACRO M1110 27-MAR-80 15:25 PAGE 8 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3 431 432 433 434 PAGE · SWITCH · 435 436 001302 437 001302 PS4:: 437 001302 438 001306 CALL BCC+ FIND :FIND A NON-BLANK IN COMMAND CINE :OK, CONTINUE :NOTHING THERE :RETURN TO TOP OF LOOP (PROMPT) 103004 1\$ 439 001310 ERR4 CALL 440 001314 000167 JMP . PS4X 441 001320 CALL. PACK CONVERT. VALUE IN COMMAND LINE TO BINARY 443 001324 444 001326 103004 BCC -CALL 2\$ ERR5 445 001332 000167 000024 JMP PS4X 446 001336 447 2\$: CALL LOOPR ; TEST · FOR · LOOP · OPTION · 448 001342 001346 016746 000000G 3\$: MOV. CALL: BINWD, - (SP) 449 :SELECT A . QLB . PAGE SELPG #LOOP,BASE 450 001352 032767 000000G · 000000G :REPEAT ? 451 001360 001370 BNE -3\$ 452 :YES 453 ; PS4X: 454 001362 455 001362 000167 000000G JMP PPSXX-456 457 458 459 CALL HOR LOADER 460 461 : CL4:: 462.001366 463 001366 CALL. CL -;CALL ROUTINE IN AMAINS 464 001372 000167 000000G JMP. PPSXX-465 466 000001 .END

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R0 M1110 27+MAR-80 15:25 PAGE 8-1
Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
PPREST M
SYMBOL TA
ALUCKE = . 040000
                              BYTE40= 000050
                                                            BYTE92=-000134
                                                                                          MAR.LO= 002000
                                                                                                                       Q$LBDP=-001001
ALU0E -- 004000
A01 -- 010000
BASE -- ******
                              BYTE41=-000051
                                                            BYTE93 = . 000135
                                                                                          MAR:0U= 000040
                                                                                                                       Q$LBP - - 000001
                              BYTE42= 000052
                                                            BYTE94= 000136
                                                                                         MBKALL= 001000
MBKCLK= 000400
                                                                                                                        Q$LDCD= 000003
                              BYTE43= 000053
                                                            BYTE95= 000137
                                                                                                                       Q$LDMD= .000004
BINUD - = · ***** GX
                              BYTE44= 000054
                                                            BYTE96= : 000140
                                                                                          MMADRD = . 000100
                                                                                                                       Q$LDPP=:002000
Q$LHP:=:010000
BITYAL = . 000000
                              BYTE45= 000055
                                                            BYTE97= 000141
                                                                                         MMLEFT= 000002
MMOE = 000004
       = 0000001
BITØ
                              BYTE46= · 000056
                                                            BYTE98= 000142
                                                                                                                       Q$MNC = 140000
Q$MR = 000052
Q$MRP = 000040
       = 000002
                              BYTE47 = . 000057
                                                            BYTE99= 000143
                                                                                          MMWRTE = . 000010
                              BYTE48= 000060
BIT10 = 002000
                                                            BYTVAL = · 000144
                                                                                          MNOBRE = 100000
BIT11 = 004000
                              BYTE49= 000061
                                                            CBKALL = 001000
                                                                                         MREN1 = 0000001
MREN2 = 020000
                                                                                                                       Q$MRP: -: 000040
Q$MRP2 -: 000240
Q$MSC: -: 040000
Q$MSET -: 000004
Q$MSP: -: 100000
Q$MCLK -: 176000
          010000
                              BYTE5 = 000005
                                                            CBKCLK=-000400
BIT13 - 020000
                              BYTE50= 000062
                                                                                          MSYN = 000040
N = 000144
                                                            CL
                                                                   = ******* GX
BIT14 = 040000
                              BYTE51= 000063
                                                            ČL4
                                                                     001366RG
                                                                                     002 · N ·
BIT15
          100000
                              RYTE52= 000064
                                                            CHOBRE = 100000
                                                                                          ONCE - ***** GX
BIT2
        = 0000004
                              BYTE53= 000065
                                                            CONSOL = · ******
CPCCEN = · 010000
                                                                                          PACK-
                                                                                                 = · ****** GX
                                                                                                                       Q$PP
                                                                                                                              = 000100
BIT3
       = 0000010
                              BYTE54= 000066
                                                                                                                  U$PP = 000100
002 · Q$PPSW= 000320
O$PP2 · = 000300
                                                                                          PGSEL3 001120R
        = 0000020
BIT4
                              BYTE55= 000067
                                                            CPREAD = . 040000
                                                                                          PLB.
                                                                                                = 0000010
          000040
                              BYTE56= · 000070
                                                            CPWRTE = . 020000
                                                                                          PLC -
                                                                                                 = 0000020
                                                                                                                       Q$QHLT= 000013
        = 000100
                              BYTE57 = . 000071
                                                            CSADRD = 000004
                                                                                         PLD = 000030
PLRWR = 000200
                                                           CSADRD= 000004
CSEQCI= 100000
CSOE = 000040
CSR1 = ******** GX-
CSWRTE= 000100
                                                                                                                       Q$QL = 000043
Q$QLA = 000053
BIT7
        = 000200
                              BYTE58 - 000072
        = 000400
BITS
                              BYTE59 = . 000073
                                                                                          PLR:EN= 000200
                                                                                                                       Q$QLB·=·000054
       = 001000
                              BYTE6 = 000006
                                                                                          PPCR - - ***** GX
                                                                                                                       Q$QLR - = -000001
BYTE0
       = 0000000
                              BYTE60= 000074
                                                                                          PPSXX = · ***** GX
BYTE1 = 000001
                             BYTE61=-000075
BYTE62=-000076
                                                                                                                       0$0W = 000042
                                                            DBR:RD= 000001
                                                                                          PRINT -- ***** GX
                                                                                                                       Q$RDCD= 000005
BYTE10=-000012
                                                                                                                                                     The second second
                                                            DB$CPP=-001457
                                                                                          PS4
                                                                                                   001302RG
                                                                                                                  002.Q$RDMD=.000006
BYTE11= 000013
                              BYTE63= 000077
                                                            DB$SPT=-000026
DB$TPC=-000023
DISPGS=-100000
                                                                                          PS4X
                                                                                                   001362R
                                                                                                                  002 Q$REBK= 001000
BYTE12= 000015
BYTE13= 000015
                              BYTE64= 000100
                                                                                         OREG.
                                                                                                = · жжжжжж GX
                                                                                                                       Q$RNC - = - 006000
                              BYTE65= 000101
                                                                                                                                           A. A. A. A.
                                                                                         QR$CR1=-176420
                                                                                                                       Q$RSC - = . 004000
BYTE14= 000016
                              BYTE66= 000102
                                                            DMAAWR = . 000005
                                                                                         QR$CR2= 176422
                                                                                                                       Q$RSET= 000010
BYTE15= 000017
                              BYTE67= 000103
                                                            DMARRD = - 000003
                                                                                         OR$LBR= 176424
                                                                                                                       Q$SM = 100000
BYTE16= 000020
                              BYTE68= 000104
                                                            DMARWR = . 000004
                                                                                          Q$ATTN= 000100
                                                                                                                       Q$SP
                                                                                                                              = 000120
BYTE17=-000021
                              BYTE69= 000105
                                                            ENBR: =:010000
                                                                                          Q$BCL - 000001
                                                                                                                       Q$SP2 -- 000340
BYTE18= 0000022
                              BYTE7 = 000007
                                                            ERR4
                                                                   =·****** GX
                                                                                         Q$CCCP=-000040
                                                                                                                       RF4
                                                                                                                                                002
                                                                                                                                 000274RG
BYTE19=-000023
BYTE2-=-000002
                              BYTE70= 000106
                                                                   = · ******* GX
                                                            ERR5
                                                                                         Q$CHB - = - 000400
                                                                                                                       RE4IN
                                                                                                                                 000350R4
                                                                                                                                                002
                              BYTE71= 000107
                                                            ERR6
                                                                     жинини БХ
                                                                                         Q$CHRL=.000200
                                                                                                                       RE4LN - 000001 G
BYTE20= 000024
                              BYTE72= 000110
                                                            FR4
                                                                     000514RG
                                                                                     002 · Q$CLR · = · 000040
                                                                                                                       RE4PUT
                                                                                                                                 000430R
BYTE21=-000025
BYTE22=-000026
                              BYTE73= 000111
                                                            ER4FC
                                                                     000600RG
                                                                                    002 · Q$CNC · = · 030000
                                                                                                                       RE4Shb
                                                                                                                                 BBB368RG
                                                                                                                                                002
                              BYTE74= 000112
                                                            ER4IH
                                                                     000570R
                                                                                    002.Q$CP. = 000060
                                                                                                                       RE4TBL #00020RG
BYTE23 = . 000027
                                                                                                                                                002
                              BYTE75=-000113
                                                            ER4LH -=
                                                                     000005 G
                                                                                         Q$CPCC= 000010
                                                                                                                       RE4X
                                                                                                                                 000476R
BYTE24= 000030
                              BYTE76=-000114
                                                                                                                                                992
                                                                                    002 · Q$CP2 · = · 000260
002 · Q$CSC · = · 010000
                                                            FR40R
                                                                     000744RG
                                                                                                                       RGQ.EN=:000200
BYTE25= 000031
                              BYTE77 = - 000115
                                                            ER400
                                                                     001102RG
                                                                                                                       RBQ::VA=:020000
RBQ::VA=:020000
RBQ::VA=:
BYTE26= 000032
                              BYTE78= 000116
                                                                     001106RG
                                                                                    002-Q$CSEL=-000360
BYTE27= 000033
                              BYTE79= 000117
                                                            ER402
                                                                     001114RG
                                                                                    002
                                                                                         Q$CSET= 000002
                                                                                                                       BYTE28= 000034
                              BYTE8 = 000010
                                                            ER4TBL
                                                                     000024RG
                                                                                         O$CSP
                                                                                                - 020000
BYTE29= 000035
                              BYTE80= 000120
                                                                                    002 · Q$DMA · = · 000001
Q$ENBK = · 040000
                                                            ER4X
                                                                     001256R
                                                                                                                       SEQ.CI= 000010
BYTE3 = 000003
                              BYTE81=-000121
                                                            FIND
                                                                     жжжжжж БХ
                                                                                                                       STQP
                                                                                                                              = · ****** GX
BYTE30= 000036
                              BYTE82=-000122
                                                                   KILL
                                                                                          Q$ENOP= 020000
                                                                                                                       ST4
                                                                                                                                 000050RG
BYTE31= 000037
                              BYTE83 = . 000123
                                                            LBPSC -- ****** GX
                                                                                          0$FAL·≕.004000
                                                                                                                       ST4CR
BYTE32= 0000040
                                                                                                                                 000170RG
                                                                                                                                                002
                              BYTE84= 000124
                                                            LOC.EN= 000100
                                                                                         0$FC - 000045
Q$FO - 000044
                                                                                                                       ST4IN
                                                                                                                                 999169R
BYTE33= 000041
                                                                                                                                                002
                              BYTE85=:000125
                                                            LOC.WA= 040000
                                                                                                                       ST4LN
                                                                                                                                 000004 G
BYTE34= 0000042
                              BYTE86=-000126
                                                           LOC.WB= 100000
LOOP = ********* GX-
LOOPR = ********* GX-
                                                                                                   000046
                                                                                                                       S.T.4L.P
                                                                                                                                 000250R ·
                                                                                                                                                002
BYTE35= 0000043
                              BYTE87 = . 000127
                                                                                                                        O$HBF -
                                                                                                 = 0000002
BYTE36= 000044
                                                                                                                                 888214RG
                                                                                                                                                992
                              BYTE88 = . 000130
                                                                                         Q$ICP = 0000006
                                                                                                                               % 000202RG
                                                                                                                       $T40P
                                                                                                                                                882
BYTE37 = . 000045
                              BYTE89= 000131
                                                            MARENI = . AAAAA I
                                                                                         Q$IHB - = - 000003
                                                                                                                       ST40R
                                                                                                                                 000236RG
BYTE38= nnnn46
                              BYTE9 = 000011
                                                           MAREN2 = . 004000
                                                                                         Q$IHRL= 000002
Q$IMRP= 000007
                                                                                                                       ST4TBL -
                                                                                                                                 000000RG
                                                                                                                                                992
BYTE39= 000047
                             BYTE90= 000132
                                                           MARLOD - 010000
                                                                                                                                 000264R
BYTE4 = 000004
                                                                                                                                                992
                                         99133
Approved For Release 2005/07/12:CIA-RDP85-00514R00020002<del>00</del>91-3<sup>S±CL</sup>R # 2005/200
                             BYTE91= 000133
                                                                                                            777
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PPREST- MACRO M1110 27-MAR-80 15:25 PAGE 8-2 Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
         - 0000001
                                     T$FSAC= · ØØØØ14
                                                                         WORD13=-000032
                                                                                                             WORD43=-000126
                                                                                                                                                  WORD73= 000222
WORD74= 000224
WORD75= 000226
ü$QB
            000005
                                     T$F$B2=-000010
                                                                         WORD14= 000034
WORD15= 000036
                                                                                                              WORD44= 000130
5≴0R
            000006
                                     T$IB: =:000026
                                                                                                             WORD45= 000132
WORD46= 000134
5金0米
            0000004
                                     T$IBAR=:000024
                                                                         WORD16= 000040
                                                                                                                                                  WORD76= 000230
WORD77= 000232
5$SR
            000007
                                     T$IBE - = - 020000
T$IBF - = - 040000
                                                                         WORD17= 000042
                                                                                                             WORD47= 000136
5$S1
                                                                         WORD18 - 000044
WORD19 - 000046
                                                                                                              WORD48= 000140
                                                                                                                                                  WORD78= 000234
WORD79= 000236
WORD8 = 000020
9692
            000014
                                     T$ICD =
                                                000040
                                                                                                             WORD49= 000142
TD$CTR=-176370
TD$CTW=-176360
                                     T$MODE = . 004000
                                                                         WORD2 - - 000004
                                                                                                             WORD5 = 000012
                                                                         WORD20=-000050
WORD21=-000052
WORD22=-000054
                                     T$0B -
                                             = 0000036
                                                                                                              WORD50=-000144
                                                                                                                                                  WORD80= 000240
WORD81= 000242
WORD82= 000244
TD$INL=-004000
TD$MEM=-000270
TD$OAR=-176344
                                     T$0BE · = · 004000
                                                                                                              WORD51= 000146
                                     T$OBF·=·010000
                                                                                                             WORD52 = 000150
WORD53 = 000152
                                     T$0BRA= 000034
T$0BWA= 000032
                                                                         WORD23= 000056
                                                                                                                                                  WORD83= 000246
 TD$0TR= 176346
                                                                         WORD24=-000060
WORD25=-000062
                                                                                                              WORD54= 000154
                                                                                                                                                  WORD84= 000250
WORD85= 000252
TD$QRD= 000274
ID$SW = 176376
                                     T$0UTA= 100000
                                                                                                             WORD55=-000156
WORD56=-000160
WORD57=-000162
                                     T$RBD0=.000200
                                                                         WORD26 = . 000064
                                                                                                                                                  WORD86= 000254
 TD$TAR= 176372
                                     T$RNB = 000040
T$RSET = 040000
                                                                         WORD27=-000066
                                                                                                                                                  WORD87= 000256
WORD88= 000260
 TD$TAW= 176362
                                                                         WORD28 = 000070
WORD29 = 000072
                                                                                                              WORD58= 000164
TD$TDR= 176374
TD$TDW= 176364
                                             = 000022
                                                                                                             WORD59=-000166
WORD6 =-000014
WORD60=-000170
                                                                                                                                                  WORD89= 000262
WORD9 = 000022
                                     T$SCLK= 020000
T$SEG1= 000000
                                                                         WORD3 = 000006
 T$AD∙ = 000020
                                                                         WORD30=-000074
WORD31=-000076
WORD32=-000100
                                                                                                                                                  WORD90= 000264
WORD91= 000266
 T$BA -
        =·000002
                                     T$SEG2= 000001
                                                                                                             WORD61=-000172
WORD62=-000174
WORD63=-000176
         = 000010
T$BD -
                                     T$SEG3=-000002
                                                                                                                                                  WORD92= 000270
T$BSO - = - 100000
                                     T$SO - - 000001
T$UBUS - 100000
                                                                         WORD33=.000102
                                                                                                                                                  WORD93= 000272
WORD94= 000274
        = 000020
                                                                         WORD34= 000104
WORD35= 000106
                                                                                                              WORD64= 000200
 T$BTAR= 000030
                                     T$1CLK=-000400
                                                                                                             WORD65= 000202
WORD66= 000204
WORD67= 000206
                                                                                                                                                  WORD95=-000276
T$BTD - = 002000
T$CD - = 000100
                                    T$8BEN= 000020
UBD.IN= 000020
UNPK = ******* GX-
                                                                         WORD36= 000110
                                                                                                                                                  WORD96= 000300.
                                                                         WORD37=-000112
WORD38=-000114
                                                                                                                                                  WORD97 = 000302
WORD98 = 000304
 T$CLK∙=∙002000
                                                                                                             WORD68-000210
T$DISK= 000200
T$DRD = 000004
                                     WORD0 = 000000
                                                                         WORD39= 000114
                                                                                                             WORD69= 000212
WORD7 = 000016
                                                                                                                                                  WORD99= 000306
                                    WORD1 = 000002
WORD10= 000024
                                                                         WORD4 - 000010
                                                                                                                                                  WRDVAL = . 000310
 T$EMEM= 010000
                                                                         WORD40= 000120
WORD41= 000122
                                                                                                              WORD70= 000214
                                                                                                                                                  XTREAD= : 001000
T$FSAA= 000000
                                     WORD11=-000026
                                                                                                             WORD71=-000216
                                                                                                                                                  XTWRTE = . 000400
T$FSAB= 000004
                                    WORD12= 000030
                                                                         WORD42= 000124
                                                                                                             WORD72=-000220
  ABS.
            000000
                             000
            000000
                             001
PPREST: 001376
                             002
ERRORS · DETECTED:
                           Ø
```

VIRTUAL MEMORY USED: 3336 WORDS (+14 PAGES) DYNAMIC MEMORY: 4916 WORDS (+18 PAGES) ELAPSED TIME: 00:00:49 PPREST PRESTZ-SP-[20,1]IM.[20,1]PPREST

THE RESERVE OF THE PROPERTY OF

500 7 - 477 A.D. B. HARES.

SP-----MACRO-::1110 27-MAR-80 15 31 PAGE 5 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3

.TITLE - SP - .PSECT - SP -

HARDWARE QUERY RESOLVER "MANUAL" DEBUGGING AIDS SUBDOCUMENT PROCESSORS

PARSE THE COMMAND LINE AND TRANSFER CONTROL TO ONE OF THE SP SUB-MODULES OR BACK TO OMAIN, CONTROL COULD HAVE BEEN PASSED TO SP IN ONE OF THREE WAYS:

1. FROM OMAIN IF SP WAS SELECTED AS THE FIRST PROCESSOR UPON ENTRY TO THE PROGRAM

>SP·LD·QX 0

2. FROM QMAIN IF SP WAS SELECTED FROM ONE OF QMAIN'S OTHER-SUB-MODULES-CP>SP-LD-QX-0 3. ON-RETURN FROM-ONE-OF-SP'S-SUB-MODULES-

SP>LD-QX-0

BE H-PROCESSOR-MAEMONIC-HAD-RETURNS-CONTROL-TO-QMHIN. EG: SP>CP-LD-CS-0
THE-STRING-CPF IS-NOT A-VALID-SP-(SECOND-LEVEL) COMMAND. SP RETURNS-CONTROL-TO-QMAIN-WHICH-IN-TURN-WILL-TRANSFER-CONTROL-TO-ITS-SUB-MODULE-CP.

SP SUB-MODULES:
SPLD: LOAD MEMORIES:
SPPR: PRINT: MEMORY: CONTENTS:
SPREST: ALL: OTHER: SP: COMMANDS:

.MCALL WTSE\$S.CLEF\$S.

THE RESERVE OF THE PROPERTY OF

0 M1110 27-MAR-80 15:31 PAGE 6 Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3 SP... $\label{table:tab$; 75,73 SPTBL: 114 000000G .ASCII .WORD 104 /LD/ LD5 :LOAD MEMORY 120 122 .ASCII .WORD .ASCII ; PRINT - FROM - MEMORY -000000G SPPR5 120 123 PS/ : PAGE · SWITCH 000000G .WORD PS5 103 114 :CALL-OR-LOADER 000000G .WORD CL5 000004 SPNUM-<.-SPTBL>/4 GODE FOR MEMORY SELECTION. ; CODE:: 000000 .WORD

```
SP------MACRO-M1110 27-MAR-80 15:31 PAGE 7
Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
     62
     63
     64
                                                      SP ROUTINES
                                             ž
     65
66
     67
        000022
                                             SPS::
     68
        000022
                                                      CALL
                                                               FIND
                                                                                           :LOCATE THE COMMAND IN THE COMMAND LINE ;
     69
70
71
        000026
                  103003
                                                      BCC
                                                               145
                                                                                           OK, CONTINUE
        000030
                                                      CALL
                                                               ÉRR3
         000034
                  000422
                                                      BR
                                                               SPSXX
     72
73
74
         000036
                  022700
                           000002
                                                      CMP
                                             15:
                                                               #2,R0
                                                                                          ;COMMANDS ARE 2 CHARS
        999942
                  001403
                                                      BEQ.
                                                               2$
         000044
                                                      CALL
                                                               ERR8
     75
76
77
         000050
                  000414
                                                      BR
                                                                                          :TRY-AGAIN
         000052
                  012700
                           000004
                                             2$:
                                                      MOV
                                                               #SPNUM, RØ
                                                                                          :R0 = NUMBER OF COMMANDS :R2 -> TABLE OF COMMAND MNEMONICS
      78
         000056
                  012702
                           ABBBBBB'
                                                      MOV.
                                                               #SPTBL,R2
     79
         000062
                                                      CALL
BCC
                                                               SCAN
                                                                                          FIND MATCH IN TABLE
         000066
                  103003
                                                               3$
                                                                                          OK, CONTINUE
     81
         000070
                                                      CALL
                                                               ERR12
                                                                                          :COMMAND NOT IN TABLE
     82
                  000402
                                                      BR
                                                               SPSXX
                                                                                          :TRY-AGAIN
     83
     84
                                                      JUMP - TO - THE - ROUTINE - THAT - GOVERNS THE - COMMAND
     85
         000076
                  000171 000000
                                             3$:
                                                      .TMP
                                                               @(R1)
     87
     88
     89
                                                      LOCAL SP-LOOP. INCLUDE PROMPT FOR SP-COMMAND:
     90
91
     92
        000102
                                                                                                                      ja (*
     93
        000102
                 012767
                           050123
                                   аваяваяс
                                                      MOV
                                                               #"SP,GCMBLK+G.DPRM+2.
                                                                                          :MOVE-SP-NAME-TO-GCM BLOCK
     94
95
        000110
                                                      CALL
                                                               GCONLY
                                                                                          :PROMPT
        000114
                                                      CALL
                                                                                          :LOCATE THE COMMAND IN THE COMMAND LINE
                                                               FIND
     96
        000120
                  103003
                                                      BCC
                                                               15
                                                                                          OK, CONTINUE
     97
        000122
                                                      CALL
                                                               ĒRR3
     98
        000126
                  000765
                                                      BR
                                                               SPSXX
        000130
     99
                  022700
                           000002
                                                      CMP
                                             1$:
                                                               #2,R0
                                                                                          ;COMMANDS.ARE.2.CHARS
    100
        000134
                  001403
                                                      BEQ
                                                               2$
    101
        000136
                                                               ĒRR8
                                                      CALL
    102
        000142
                 000757
                                                               SPSXX.
                                                      BR
                                                                                          :TRY-AGAIN
    103
        000144
    104
                  012700
                           000004
                                                      MOV-
                                                               #SPHUM, R0
                                                                                          :R0 = NUMBER OF COMMANDS
        000150
    105
                                                                                          #RETURN TO 'MAIN', LOOK FOR PROCESSOR MNEMONIC
                 012702
                           000000
                                                      MOV
                                                               #SPTBL, R2
        000154
                                                      CALL
                                                               SCAN
    107
        000160
                  103002
                                                      BCC
                                                               3$
    108
        000162
                 000167
                           000000G
                                                      JMP
                                                               COMXX
    109
    110
                                                      JUMP TO THE ROUTINE THAT GOVERNS THE COMMAND
    111
    112-000166
                 000171
                          000000
                                             3$:
                                                      JMP
                                                               @(R1)
```

The state of the s

0 M1110 27-MAR-80 15:31 PAGE 8 Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3

114 115 000001 : END-

```
SP-----MACRO-M1110 27-MAR-80 15:31
                                            :31 PAGE 8-1
Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
SYMBOL . TABLE
ALLICKE - 040000
                               BYTE42=:000052
                                                               BYTE94= 000136
                                                                                               PLB
                                                                                                                              Q$QLR·=·000001
Q$QW =·000042
Q$RDCD=·000005
                                                                                                       = .000010
ALU0E - 004000
                               BYTE43= 000053
                                                               BYTE95= 000137
                                                                                               PLC:
                                                                                                       = 0000020
A01 = 010000
BITVAL = 000000
                               BYTE44=:000054
                                                               BYTE96= 000140
                                                                                               PLD.
                                                                                                      = - 000030
                               BYTE 45 = - 000055
                                                               BYTE97= 000141
                                                                                               PLRWR - = - 000200
                                                                                                                               Ū$RDMD= 000006
       =·000001
                               BYTE46= 000056
                                                               BYTE98= 000142
                                                                                               PLR.EN= 000200
                                                                                                                              Q$REBK= 001000
BITI
       = 0000002
                               BYTE47= 000057
                                                               BYTE99= 000142
                                                                                               PS5 = *********

QR$CR1= 176420
                                                                                                                              Q$RNC -- 006000
Q$RSC -- 004000
BITIA

= ⋅ 002000
                               BYTE48= 000060
                                                               BYTVAL = . 000144
       = 004000
BITii
                                                               CBKALL = 001000
CBKCLK = 000400
CL5 = ********** GX**
                               BYTE49= : 000061
                                                                                               QR$CR2= 176422
                                                                                                                              Q$RSET= 000010
BIT12 -- 010000
                               BYTE5 = 000005
                                                                                                                              Q$SM = 100000
Q$SP = 000120
Q$SP2 = 000340
                                                                                               QR$LBR= 176424
Q$ATTN= 000100
       = · 020000
BIT13
                               BYTE50= 0000062
        = 040000
BIT14
                                                               CHOBRE = 100000
                               BYTE51 = . 000063
                                                                                               Q$BCL -- 000001
BIT15
       =·100000
                               BYTE52= 000064
                                                               CODE -
                                                                       000020RG
                                                                                         002 · Q$CCCP= · 000040
                                                                                                                              RGQ.EN= 0000340
RGQ.YA= 020000
        = · 000004
BIT2
                               BYTE53 = . 000065
                                                               COMXX: = : ****** GX
                                                                                               Q$CHB - = 000400
BIT3
          000010
                               BYTE54= . MANASS
                                                               CPCCEN= 010000
                                                                                               Q$CHRL= 000200
                                                                                                                              SCAN = ******
SEQ:CI= *000010
SPNUM-= *000004
BIT4
          000026
                               BYTE55 = · 000067
                                                               CPREAD = 040000
CPWRTE = 020000
                                                                                               Q$CLR · = · 000040
BIT5
        = 0000040
                               BYTE56= 000070
                                                                                               Q$CNC -- 030000
GITE
        = 000100
                               BYTE57 = . 000071
                                                               CSADRD = . 000004
                                                                                                                                        Q$CP· = 0000060
                                                                                                                              SPPR5 = ******** GX-
BIT7
        = 000200
                               BYTE58=-000072
                                                               CSEQCI= 100000
                                                                                               Q$CPCC= 000010
                                                                                                                              SPS.
        = 000400
                               BYTE59= 000073
                                                                                               Q$CP2---000260
Q$CSC---010000
                                                               CSOE - 000040
CSWRTE - 000100
                                                                                                                              SPSXX-
BIT9
        = 001000
                               BYTE6 = 000006
                                                                                                                                        0000000R
000000
                                                                                                                               SPTBL
                                                                                                                                                     14002-11
        = 000000
BYTE@
                               BYTE60= 000074
                                                               DBR.RD= 000001
                                                                                               Q$CSEL = .000360
Q$CSET = .000002
Q$CSP - = .020000
                                                                                                                               Ş$CLR∙=
       = 000001
BYTE
                                                               DB$CPP=-001457
DB$SPT=-000026
                               BYTE61= 000075
                                                                                                                                      * 1000001
                                                                                                                               Ś$LA
BYTE10= 000012
                               BYTE62= 000076
                                                                                                                                      = 0000005
BYTE11= 000013
BYTE12= 000014
                                                                                                                              S$0B
                               BYTE63= 000077
                                                               DB$TPC=-000023
DISPGS=-100000
                                                                                                                                      = 000006
                                                                                               Q$DMA - = - 000001
                                                                                                                              S$OR
                               BYTE64= 000100
                                                                                                                             3+UX = 000004

S±SP = 000007

S±SP = 000010

S±SP = 000014

TD⊈CTR = 176370

TD⊈CTW = 176360

TD⊈TW = 176360
                                                                                               Q$ENBK = . 040000
BYTE13= 000015
                               BYTE65= 000101
                                                               DMAAUR = . 000005
                                                                                               Q$ENOP=.020000
BYTE14= 000016
                               BYTE66= 000102
BYTE67= 000103
                                                               DMARRD = - 000003
                                                                                               Q$FAL -- 004000
Q$FC -- 000045
BYTE15= 000017
                                                               DMARWR- 000004
BYTE16= 000020
BYTE17= 000021
                               BYTE68= 000104
                                                               ENBR: =:010000
                                                                                                      = 000044
                               BYTE69= 000105
                                                               ERR12 -- ******* GX
                                                                                               OSEP.
                                                                                                      = . 000046
BYTE18= 000022
                                                                      BYTE7 = 000007
BYTE70= 000106
                                                               ERR3
                                                                                               Q$HBF - 000002
                                                                                                                               TD$INL= 004000
BYTE19= 000023
                                                               ERR8
                                                                                               Q$ICP - 000006
                                                                                                                              TD$MEM= 000270
TD$0AR= 176344
TD$0TR= 176346
BYTE2 - - 000002
                               BYTE71= 000107
                                                               FIHD.
                                                                      -- ****** GX
                                                                                               Q$IHB - = - 000003
BYTE20=-000024
                               BYTE72= 000110
                                                               GCMBLK = ****** GX
                                                                                               Q$IHRL= 000002
BYTE21= 000025
                               BYTE73 = . 000111
                                                               GCONLY= ****** GX
                                                                                               Q$IMRP= 000007
                                                                                                                               TD$QRD= 000274
BYTE22= 000026
                               BYTE74= . 000112
                                                               Q$LBD - - 001000
                                                                                                                              TD$SW---176376
BYTE23=-000027
                               BYTE75= 000113
                                                                      = - ********* GX
                                                               LD5
                                                                                               Q$LBDP=-001001
                                                                                                                              TD$TAR= 176372
TD$TAW= 176362
BYTE24= 0000030
                               BYTE76= 000114
                                                               LOC.EN= 000100
                                                                                               Q$LBP. - . 000001
BYTE25= 000031
                               BYTE77= 000115
                                                               LOC.WA= 040000
                                                                                               Q$LDCD= 000003
                                                                                                                               TD$TDR= 176374
BYTE26= 000032
                               BYTE78= 000116
                                                               LOC:WB= 100000
MAREN1= 000001
MAREN2= 004000
                                                                                               Q$LDMD= 000004
                                                                                                                               TD$TDW= 176364
BYTE27= 000033
                               BYTE79= 000117
                                                                                               Q$LDPP=-002000
                                                                                                                              T$AD = 0000020
T$BAT = 000002
BYTE28= 000034
                               BYTE8 = 000010
                                                                                              Q$LHP - - 02000
Q$LHP - - 010000
Q$MNC - - 140000
Q$MR - - 000052
Q$MRP - - 000040
BYTE29= 000035
                               BYTE80 = . 000120
                                                               MARLOD = 010000
                                                                                                                                     = 0000107
BYTE3 = 000003
                               BYTE81= 000121
                                                               MAROUT= 000002
MAR.LO= 002000
                                                                                                                              T$B$0 -= 100000
T$BT = 000020
BYTE30= 0000036
                               BYFE82= 000122
BYTE31 = . 000037
                               BYTE83 = . 000123
                                                               MAR.OU= 000040
                                                                                               Q$MRP2= 000240
Q$MSC = 040000
Q$MSET= 000004
                                                                                                                               T$BTAR= 000030
BYTE32= 000040
                               BYTE84= 000124
                                                               MBKALL = 001000
MBKCLK = 000400
                                                                                                                              T$8TD -- 002000
T$CD -- 000100
T$CLK -- 002000
BYTE33= 000041
                               BYTE85 - 000125
BYTE34= 000042
                               BYTE86 = . 000126
                                                               MMADRD = . 000100
                                                                                               Q$MSP - = 100000
BYTE35= 000043
                               BYTE87 = . 000127
                                                               MMLEFT= 000002
MMOE = 000004
MMWRTE= 000010
                                                                                               Q$NCLK= 176000
                                                                                                                              T$DISK=-000200
T$DRD-=-000004
BYTE36 = 0000044
6 TE37 = 000045
                               BYTE88= 000130
                               BYTE09= 000131
                                                                                               Q$PPSW= 000320
                                                                                                                               T$EMEM= 010000
BYTE38= 000046
                               BYTE9 = @000011
                                                               MNOBRE = 100000
                                                                                               Q$PP2 - 000300
                                                                                                                             BYTE39= 000047
                               BYTE90= 000132
                                                               MREN1 = 000001
MREN2 = 020000
                                                                                                    7$F$AE - 000004
7$F$AE - 000044
A = 000053 T$F$B2 - 000010'
BYTE4 = 000004
                               BYTE91= 000133
BYTE40= 000050
                               BYTE92=-000134
                                                               MSYN = 000040
                                                                                               Q$QLA - = ∙000053
BYTE41 = 000051
                               BYTE93 = 000135
                                                                                     CIA-RDP85-00514R00020001-3<sup>T$IB</sup> = 000026
                                            Approved For Release 2005/07/12
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O M1110 27-MAR-80 15:31 PAGE 8-2.
Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
SYMBOL TA
T$1868 = . 000024
                                   WORD10= 000024
                                                                      WORD34= 000104
                                                                                                         WORD57= 000162-
                                                                                                                                            WORDS = 000020
T$IBE - - 020000
T$IBF - - 040000
                                                                      WORD35= 000106
                                   WORD11=-000026
                                                                                                         WORD58= 000164
                                                                                                                                            WORD80= 000240
                                   WORD12= 000030
                                                                      WORD36= 000110
                                                                                                         WORD59 = 000166
WORD6 = 000014
                                                                                                                                            WORD81=:000242
WORD82=:000244
WORD83=:000246
T$ICD - = - 000040
                                   WORD13=-000032
                                                                      WORD37=-000112
T$MODE = 004000
                                   WORD14= 000034
WORD15= 000036
                                                                      WORD38= 000114
                                                                                                         WORD60= 000170
        = 0000036
                                                                      WORD39= 000116
                                                                                                         WORD61=-000172
WORD62=-000174
                                                                                                                                             WORD84= 000250
                                   WORD15-000030
WORD16-000040
WORD17-000042
T$08E - = - 004000
                                                                      WORD4 = 000010
                                                                                                                                            WORD85=-000252
WORD86=-000254
WORD87=-000256
T$0BF · = · 010000
                                                                      WORD40=-000120
                                                                                                         WORD63= 000176
T$0BRA= 000034
                                   WORD18= 000044
                                                                      MORD41= 000122
                                                                                                         WORD64= 000200
T$0BWA=-000032
                                   WORD19= 000046
                                                                      WORD42 = 000124
                                                                                                         WORD65=-000202
WORD66=-000204
                                                                                                                                             WQRD88=:000260
T$0UTA= 100000
                                   WORD2 - - 000004
WORD20 - 000050
                                                                      WORD43= 000126
                                                                                                                                            WORD89= 000262
WORD9 = 000022
T$RBD0=-000200
                                                                      WORD44= 000130
                                                                                                         WORD67= 000206
T$RNB - = - 000040
                                   WORD21=-000052
                                                                      WORD45= 000132
                                                                                                         WORD68-000210
                                                                                                                                            WORD90= 000264
WORD91= 000266
WORD92= 000270
T$RNB.=.000040
T$RSET=.040000
T$SC. =.000022
T$SCLK=.020000
T$SEG!=.000000
T$SEG2=.000001
                                                                                                         WORD68= 000210
WORD69= 000212
WORD7 = 000016
WORD70= 000214
WORD71= 000216
                                   WORD22= 000054
                                                                      WORD46= 000134
                                   WORD23 = 0000056
                                                                      WORD47= 000136
                                   WORD24= 000060
                                                                      WORD48 = 000140
                                                                                                                                             WORD93= 000272
                                   WORD25=-000062
WORD26=-000064
WORD27=-000066
                                                                       WORD49= 000142
                                                                                                                                            WORD94= 000274
WORD95= 000276
                                                                      WORD5 = 000012
WORD50= 000144
                                                                                                         WORD72= 000220
T$SEG3 = . 0000002
T$SO - = . 0000001
                                                                                                                                            WORD96= 000300
WORD97= 000302
WORD98= 000304
                                                                                                         WORD73=-000222
WORD74=-000224
                                   WORD28= 000070
                                                                      WORD51=-000146
T$UBUS= 100000
                                   WORD29= 000072
WORD3 = 000006
                                                                      WORD52= 000150
                                                                                                         WORD75=-000226
T$1CLK= 000400
                                                                                                         WORD76= 000220
WORD77= 000232
                                                                      WORD53=-000152
                                                                                                                                             WORD99= 000306
T$8BEN= : 000020
                                   WORD30 = . 000074
                                                                      WORD54= 000154
                                                                                                                                             WRDVAL = . 000310
UBD.IN= 000020
                                   WORD31=-000076
                                                                      WORD55=-000156
                                                                                                         WORD78 = - 000234
                                                                                                                                             XTREAD= 001000
WORD0 = 000000
WORD1 = 000002
                                   WORD32=-000100
                                                                      WORD56= 000160
                                                                                                         WORD79=-000236
                                                                                                                                            XTWRTE = . 000400
                                   WORD33=-000102
. ABS.
           000000
                            000
           000000
000172
                           001
                           002
ERRORS DETECTED:
VIRTUAL-MEMORY-USED: 3210 WORDS- (-13 PAGES)
DYNAMIC-MEMORY: 3860 WORDS- (-14 PAGES)
ELAPSED-TIME: 00:00:41
SP.SP/-SP=[20,1]IM,[20,1]SP
```

are this

```
0.M1110 27-MAR-80 15:32
SPLD---
                                         32 PAGE 5
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                                                            .FITLE. SPLD
.PSECT. SPLD
         000000
       23456789
                                                            HARDWARE QUERY RESOLVER 'MANUAL' DEBUGGING AIDS
                                                            SUBDOCUMENT PROCESSOR TEST ROUTINES
                                                            COMMANDS:
                                                            LD
                                                                      LOAD SP MEMORIES
      10
      11
                                                            ONCE A COMMAND HAS BBEN EXECUTED (OR AN ERROR ENCOUNTERED)
THIS MODULE RETURNS CONTROL TO THE MODULE SPAT LOCATION
      12
13
                                                             SPXX'
      14
15
16
17
                                                            .MCALL WTSE$S.CLEF$S
      18
     201234567890123345678904123446
                                                            TABLE OF VALID SP MEMORY MNEMONICS AND ADDRESSES OF THEIR
                                                            ASSOCIATED ROUTINES
         000000
                                                  LD5TBL::
         000000
                                  130
                                                             .ASCII
                                                                      ZOXZ
LDSOX:
                                                                                                     : QEX - MEMORY-
         000002
                   000302
                                                            . WORD
         000004
                       123
                                  122
                                                                                                     ;SUBREAD MEMORY
         000006
                   0003
                                                             .WORD
                                                                      LD5SR
         000010
                                  106
                                                             .ASCII
                                                                      ZSEZ
                                                                                                     ;SDLB · REFERENCE · PAGE
         000012
                                                             .WORD
                                                                      LD5QR
         000014
                                 060
                                                             .ASCII
.WORD
                                                                       /S0/
                                                                                                    :SDLB - PAGE
                   000312
         000016
                                                                      LD50B
         000020
                       123
                                 061
                                                             .ABCII
                                                                       ZS 1 z
                                                                                                     :SIDMEM-1
         000022
                   000516
                                                             .WORD
         000024
000026
                       123
                                                            .ASCII
                                                                      /S2/
                                                                                                    :SIDMEM-2
                   000526
                                                            .WORD
                                                                      LDSS2
                   000006
                                                  LD5LH
                                                                      <.-LD5TBL>/4
                                                            LOAD
                                                            PERFORM THIRD LEVEL PARSING EG. IN THE COMMAND: SP>LD QX 0
                                                            PARSE . THE .
     47
         000036
                                                  LD5::
     48
         000030
                                                            CALL
                                                                      FIND
                                                                                                    ;LOCATE MEMORY MNEMONIC IN COMMAND LINE
     49
         000034
                   103004
                                                            BCC.
                                                                      1$
                                                                                                    OK, CONTINUE
MISSING OPERAND
EXIT
     50
         000036
                                                            CALL
                                                                      ERR4
     51
52
                   000167
         000042
                             000632
     53
54
                                                           MATCH: THE: MNEMONIC: IN: THE COMPANY THE AGAINST: THE: TABLE OF VALID: MNEMONICS:
     55
         000046
     56
                   012700
                             000006
                                                           MOV
                                                 1$:
                                                                      #LD5LH,R0
                                                                                                    : NUMBER OF TABLE ENTRIES
         000052
                   012702
                             0000000
                                                            MOV
                                         Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
```

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```
58 000056
                                                                  GALL
                                                                             SCAN
                                                                                                                 :MATCH - AGAINST - COMMAND - LINE
 59
     000062
                  103004
                                                                 BCC.
                                                                             2$
                                                                                                                 :MATCH WAS MADE
                                                                                                                 *MATCH WAS MADE : INVALID MEMORY MAREMONI COMPANY OF SEC
 60
     000064
                                                                 CALL
                                                                             ERR7
 61
                                                                  JMP.
                                                                             LD5X
 62
63
                                                                                                                                        Page 1
                                                                  SAVE POINTER TO ROUTINE ASSOCIATED WITH THE MEMORY MNEMONIC
 64
                                                                 SCAN-THE REMAINDER OF THE COMMAND LINE FOR CONTROL INFORMATION:
 65
                                                                     START ADDRESS ONLY, REPEAT PROMPT FOR EACH MEMORY LOCATION FROM THE START ADDRESS FORWARD, NB. END OF MEMORY (AS DETECTED BY THE QMAIN SUBROUTINE PDATA) OR A <CR> RESPONSE TO THE PROMPT.
 66
67
 69
70
                                                                      WILL TERMINATE THE LOAD. SP>LD OX 0
                                                                                                                                          差异电
                                                                                                                                                  医香油液性原性
                                                                      START ADDRESS, LOOP INDICATOR, LOOP ON THE LOADING OF
 71
72
73
74
                                                                     START HIDDRESS, LOUP INDICATION. LOUP ON THE LOHDING OF STARTS ONE MEMORY LOCATION ONLY.

SPELD QX 0 L

START ADDRESS, END ADDRESS, NO LOOP, ISSUE ONLY ONE PROMPT AND FILL MEMORY (BETWEEN START AND END ADDRESSES).
 75
76
                                                                      WITH THIS VALUE.
                                                                     WITH THIS YHLDE,

SP>LD QU 0 7

START ADDRESS, END ADDRESS, LOOP INDICATOR, ISSUE ONLY ONE

PROMPT AND LOOP ON THE LOADING OF MEMORY (BETWEEN START)
 77
78
  79
 80
 81
                                                                      SP>LD-QW-0 7 L-
 83
 84
     000074
                 010167
                             000000G
                                                                 MOV
                                                                             R1.RTHPT
                                                                                                                 ;SAVE POINTER
 85
      000100
                                                                 CALL
                                                                             FIND
                                                                                                                 :LOCATE START ADDRESS IN COMMAND LINE :OK, CONTINUE
 86
87
      000104
                                                                 BCC
                                                                             3$
      000106
                                                                 CALL
                                                                             ERR4
                                                                                                                 : "MISSING OPERAND:
 88
      000112
                 000167
                                                                  JMP.
                                                                             LD5X
                                                                                                                 :FXIT
 89
      000116
                                                      3$:
                                                                 CALL
                                                                             PACK
                                                                                                                 CONVERT.COMMAND.LINE.VALUE.TO BINARY CONVERSION.SUCCESSFUL.
 98
     000122
                  103004
                                                                 BCC:
                                                                             4$
 91
     000124
                                                                 CALL
                                                                             ERR5
                                                                                                                 : "INVALID NUMERIC VALUE"
 92
                  000167
      000130
                             000544
                                                                  JMP
                                                                             LD5X
 93
 94
     000134
                                                                             BINWD, MSTRT
BINWD, MSTR2
                             000000G 000000G 4$:
                                                                 MOV.
                                                                                                                 ;SAVE-LOADING-START-ADDRESS-
;SAVE-IT-TWICE-(FOR-REFRESH-ON-LOOP)
 95
     000142
                 016767
                             000000G · 000000G
                                                                 MOV-
 96
      000150
                 012767
                             177777
                                         000000G
                                                                             #-1,MEND
                                                                                                                 : INIT-END-ADDRESS
 97
 98
99
                                                                 START ADDRESS HAS BEEN FOUND, SCAN FOR END ADDRESS OR LOOP INDICATOR (CONDITIONS 2, 3 ABOVE), IF THERE IS NOTHING FURTHER IN THE COMMAND LINE, CONDITION 1 IS IN EFFECT.
100
101
102-000156
                                                                 CALL
                                                                             FIND
                                                                                                                 :SCAN · COMMAND · LINE
103
     000162
                  103004
                                                                             5$
                                                                                                                 SOMETHING THERE:
SIGNAL TO REPEAT PROMPT
     000164
                  052767
104
                             000000G · 000000G
                                                                 BIS
                                                                             #RP,BASE
105
     000172
                  000437
                                                                 BR
                                                                             9$
                                                                                                                 JUMP TO RTH
106
107
      000174
                  122711
                             000114
                                                                 CMPB
                                                                             #*L,(R1)
                                                                                                                 :LOOP · INDICATOR
     000200
000202
100
                 001006
                                                                 BHE -
                                                                                                                 #NO. MUST-BE-USPER-ADDRESS:
#SET-END-ADDR-=-START-ADDR-
#HOW-TO-STOP-LOOP-
                                                                             6$
109
                 016767
                             000000G · 000000G
                                                                  MOV.
                                                                             MSTRT, MEND
     000210
110
                                                                 CALL
                                                                             HANG
111
112
     000214
                 000426
                                                                 BR
                                                                             9$
                                                                                                                 :JUMP - TO - RTH -
                                                                                                                 CONVERT UPPER ADDRESS
113
     000216
                                                     6$:
                                                                 CALL
                                                                             PACK
114 000222
                 103004
                                                                 BCC
                                                                             7$
```

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                                                            ERR5
                                                                                       : INVALID - NUMERIC
    000230
             000167
                      000444
                                                  JMP -
                                                           LD5X
                                                                                       :EXIT:
117
                                                  SAVE-END-ADDRESS-(BINARY)
CHECK-FOR-LOOP-INDICATOR-AFTER-END-ADDRESS (CONDITION-4)
118
120
121 000234
122 000242
    000234
             016767
                       000000G.000000G.7$:
                                                            BINWD, MEND
                                                  MOV
                                                                                       :SET-UP-END-ADDRESS
                                                  CALL
                                                            FIND
                                                                                       CHECK FOR LOOP INDICATOR
123
    000246
              103411
                                                  BCS
                                                            9$
                                                                                       :NO-LOOP-
124
    000250
              122711
                       000114
                                                                              ;CORRECT INDICATOR:
;YES, CONTINUE:
;LOOP:OPTION:ERROR
                                                  CMPR
                                                            #*L*(R1)
125
    000254
             001404
                                                  BEQ.
                                                            85
    000256
126
                                                  CALL
                                                            ERR11
             000167
127
    000262
                       000412
                                                  JMP.
                                                            LD52
128.000266
                                         8$:
                                                  CALL
                                                            HANG
                                                                                       :HOW-TO-STOP-LOOP
129
130
    000272
             016701
                       000000G
                                         98:
                                                  MOV.
                                                           RTHPT,R1
                                                                                       ; POINT · TO · ROUTINE
131
132
    000276
             000171
                                                  JMP
                                                           @(R1)
                                                                                       :JUMP . TO . ROUTINE .
133
134
                                                  LOAD · QEX · MEMORY ·
135
    000302
136
             012767
                       000004
                               000000G·LD5QX::
                                                  MOV
                                                            #S$QX,CODE.
                                                                                       :SET-MEMORY-SELECT-CODE - = - QEX-
137
             000420
                                                  BR
                                                           LD50
138
139
                                                  LOAD · SDLB · PAGE · MEMORY
140
141
    000312
             012767
                       000005
                               000000G-LD5QB::
                                                  MOV.
                                                           #S$QB,CODE
                                                                                       :SET-MEMORY-SELECT-CODE- = - SDLB PAGE
142-668326
             000414
                                                  BR
                                                           LD50
143
                                                                                                                1
144
                                                  LOAD · QLB · REFERENCE · PAGE
145
146
    000322
                                         LD5QR::
147
    000322
             012767
                      000006
                                000000G
                                                            #S$QR,CODE
                                                                                       SET MEMORY SELECT FORE
148
    000330
             003410
                                                           LD5Q
149
150
151
                                                  LOAD SUBREAD MEMORY
152.000332
153
    000332
             012767
                      999997
                               000000G
                                                  MOV
                                                            #S$SR,CODE
154
    000340
             016746
                      000000G
                                                                                       ;SUPPLY-UPPER-MEMORY LIMIT
                                                  MOV:
                                                           SRHIGH,-(SP)
    000344
000356
155
             016746
                                                  MOV
                                                           SRLOW, -(SP)
                                                                                       :LOWER · LIMIT
156
             000404
                                                           LD5G0
    000352
                                         LD50:
158 000352
             016746
                                                  MOV
                                                           SQHIGH,-(SP)
                                                                                       ;SUPPLY-UPPER-MEMORY LIMIT-
159
    000356
             016746
                      000000G
                                                  MOV-
                                                           SQLOW, - (SP)
                                                                                      ,:LOWER LIMIT
160
    000362
                                         LD5G0:
161
    000362
                                                  CALL.
                                                           BUFSET.
                                                                                       :PREPARE · FOR · LOAD ·
162 - 000366
              103002
                                                  BCC
                                                           15
                                                                                       OK, CONTINUE
163
    000370
             000167
                      000304
                                                           LD5X
                                                                                       ; ERROR, EXIT
165
    000374
             032767
                      000000G 000000G 1$:
                                                           #RP,BASE
                                                  BIT.
                                                                                       :REPEAT-PROMPT
166
    000402
             001414
                                                  BEQ.
                                                                                       :NO. ONCE ONLY
:READ DATA FROM COMMAND TANK
                                                           5$
    000404
                                                  CALL
BCS
                                         2$:
                                                           PDATA
168
    000410
             103401
                                                           3$
                                                                                       :END OF MEMORY
169
             102002
    000412
                                                  ₿VĈ
                                                                                       ;HO <CR> RESPONSE, CONTINUE
170 000414
                                         3$:
171 000414
            .000167 000260
                                 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
```

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172 · 173 000420 174 000420 175 000424 176 000432 · 177	066767 000764	; 4\$: 000000G-000000G-	CALL · ADD · BR	LOD5M1 INCVAL,MSTR2. 2\$:LOAD-16 BIT-MEMORY- :BUMP-ADDRESS	To Comment of the Com
178 179		;	PROMPT	- ONCE - THEN - FILL - MEMORY -		
180 000434 181 000440 182 000442 183 000444	103401 102002	: 5\$: 6\$:	GALL: BCS: BVC:	PDATA· 6\$ 7\$:PROMPT: :END:OF:MEMORY: :NO: <cr> RESPONSE: CONTINUE:</cr>	Bys up
184 000444 185	000167	000230	JMP.	LD5X		7 1 4
186 000450 187 000450 188		; 7\$:	CALL	LOD5M1	;LOAD-16 BIT-MEMORY-	
189 000454 190 000462 191 000470 192 000472 193 000500 194 000502 195 000506 196 000514	066767 026767 101767 032767 001002 000167 016767	0000005-0000005- 0000005-0000005- 0000005-0000005- 000172 0000005-0000005-8\$:	ADD CMP BLOS BIT BNE JMP MOV BR	INCVAL, MSTR2. MSTR2.MEND. 7\$ #LOOP.BASE. 8\$ LD5X MSTRT, MSTR2. 7\$	REINITIALIZE ADDRESS	EACHED T

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SPLD...
              0 · M1110
                       27-MAR-80 15:32 PAGE
                                       32 PAGE 6
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     198
                                                         LOAD SIDMEM (MULTIPLE PAGES)
    200
         000516
         000516
000524
    201
                   R12767
                            000010 · 000000G
                                                                   #S$S1,CODE
                                                                                               :SELECT SIDMEM 1
    202
                   000403
                                                         BR
                                                                  LD5S
    203
         000526
                                               LD5S2::
    294
         000526
                   012767
                            000014
                                     000000G
                                                         MOV
                                                                   #S$S2,CODE
                                                                                               :SELECT-SIDMEM-2
         000534
     205
                                               LD5S:
         000534
    206
                   016746
                            000000G
                                                         MOV.
                                                                  SDHIGH,-(SP)
                                                                                               :SUPPLY-UPPER-MEMORY LIMIT
    297
         000540
                   016746
                            000000G
                                                         MOV.
                                                                  SDLOW, - (SP)
                                                                                               ;LOWER·LIMIT
     288
         000544
                                                         CALL
                                                                  BUFS3
                                                                                               :PREPARE FOR LOAD
     209
         000550
                   103002
                                                         BCC:
                                                                   1 $
                                                                                               OK, CONTINUE
     210
         000552
                   000167
                                                         JMP
                                                                  LD5X
                                                                                               ;ERROR, EXIT
     211
     212
         000556
                   032767
                            000000G · 000000G · 1$:
                                                         BIT.
                                                                   #RP,BASE
                                                                                               :REPEAT PROMPT
     213
         000564
                   001414
                                                         BED.
                                                                  548
                                                                                               :NO. ONCE ONLY
    214 000566
215 000572
                                                         CALL
                                                                  PDATA
                                                                                               :READ.DATA FROM.COMMAND.LINE
:END.OF.MEMORY.
         999572
                   103491
     216
         000574
                   102002
                                                         BVC
                                                                   4$
                                                                                               :NO:<CR> RESPONSE, CONTINUE
     217
         000576
                                               3$:
    218
219
                   000167
         000576
                            000076
                                                         JMP
                                                                  LD5X
     220
         000602
                                                4$:
    221
222
         000602
                                                         CALL
                                                                  LOD5M3
                                                                                               :LOAD 48 BIT MEMORY
         000606
000614
     223
                   066767
                            000000G · 000000G
                                                                                               ;BUMP · ADDRESS
                                                         ADD
                                                                   INCVAL, MSTR2
     224
                   000764
                                                                                               : REPEAT.
     225
    226
227
228 000616
                                                         PROMPT ONCE THEN FILL MEMORY
                                               5$:
                                                         CALL
                                                                  PDATA:
                                                                                               ; PROMPT
     229
         000622
                   103401
                                                         BCS:
BVC:
                                                                  6$
                                                                                               :END.OF.MEMORY.
    230
231
232
         000624
                   102002
                                                                  7$
                                                                                               :NO <CR> RESPONSE, CONTINUE
         000626
                                               6$:
         000626
                   000167
                            ййййй46
                                                         TMP
                                                                  1.05%
    233
         000632
                                                7$:
     235
         000632
                                                         CALL
                                                                  LOD5M3
                                                                                               :LOAD-48 BIT-MEMORY-
                                                                                               #HAS-UPPER MEMORY-LIMIT-BEEN REACHED: NO. CONTINUE: #LOOP-ON:
     237
         000636
                   066767
                            000000G-000000G
                                                         ADD
                                                                   INCVAL, MSTR2
     238
         000644
                                                                  MSTR2,MEND
                   026767
                            000000G · 000000G
                                                         CMP
         000652
                   101767
                                                         BLOS
BIT
                                                                   74
     249
         000654
                            000000G · 000000G
                                                                   #LOOP, BASE
     241
         000662
                   001002
                                                         BHE -
                                                                                               ;YES, CONTINUE
         000664
                   000167
                            000010
                                                                  LD5X
                                                         JMP.
    243 000670
244 000676
                   016767
                            000000G-000000G-8$:
                                                         MOV.
                                                                  MSTRT, MSTR2
                                                                                           " " ;REINITIALIZE ADDRESS
                   000755
     245
     246
     247
         000700
         000700
000704
     248
                   012746
                            000000
                                                         MOV.
                                                                   #S$CLR,-(SP)
                                                                                               :CLEAR-SP
                                                                                               WRITE TO CONTROL REG

CLEAR PROMPT FLAG

(KILL AST (IF THERE WAS ONE)
     249
                                                         CALL
                                                                  SPCR
     250
         000710
                   042767
                            000000G · 000000G
                                                         BIC:
                                                                  #RP,BASE
     251
         000716
                                                         CALL
                                                                  KILL
    252 · 0007222 ·
                  000167
                            000000G
                                                                  SPSXX
```

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```
254
255
                                                           LOAD SINGLE WORD MEMORY.
256
257
     000726
                                                LOD5M1:
258 000726
               012746
                          000001
                                                           MOV
                                                                      #S$LA,-(SP)
                                                                                                     :ADDRESS-SELECT-
:SEND-TO-SP-CONTROL-REG-
:ACTUAL-ADDRESS-
259
     000732
                                                           CALL
                                                                     SPCR
260
     000736
                016746
                          000000G
                                                           MOV.
                                                                     MSTR2,-(SP)
261
     000742
                                                           CALL
                                                                                                     :SEND.TO.SP.
:SELECT.MEMORY
                016746
                          000000G
                                                           MOV:
                                                                     CODE,
                                                                            -(SP)
263
     000752
                                                           CALL
     000756
264
               016746
                          000000G
                                                           MOV.
                                                                     DATA1,-(SP)
                                                                                                     ;DATA·WORD FOR·MEMORY
;SEND·DATA TO·SP·
265
     000762
                                                           CALL:
                                                                     LBSP
266
267
268
     000766
                                                           RETURN.
                                                          LOAD - 3 WORD - MEMORY -
269
270
271
272
     000770
                                                ĹOD5M3:
     000770
                                                           SAVE -
                                                                     CODE.DATA1
     001000
                                                           CALL
                                                                     LOD5M1
                                                                                                     ;LOAD·WORD A:
;SELECT·WORD·B
;SET·UP·DATA!
273
     001004
                005267
                          BRABBAG
                                                           INC
                                                                     CODE
     001010
                016767
                          000000G - 0000000G -
                                                           MOV-
                                                                     DATA2,DATA1
275
     001016
                                                           CALL
                                                                     LOD5M1
                                                                                                      :LOAD WORD B
276
277
     001022
                005267
                          000000G
                                                           INC
                                                                     CODE
                                                                                                     ;SELECT.WORD.C
;SET.UP.DATA1
;LOAD.WORD.C
     001026
                016767
                          000000G-000000G
                                                                     DATA3, DATA1
278
     001034
                                                          CALL ·
RESTOR ·
RETURN ·
                                                                     LOD5M1
279
     001040
                                                                     CODE, DATA1
280 001050
281
282
                000001
                                                           .END
```

THE STORMS WITH THE STREET

```
27-MAR-80 15:32 PAGE 7-1
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SYMBOL TA
ALUCKE = . 040000
                               BYTE39= 000047
                                                              BYTE90=-000132
                                                                                            LOC:WA= 040000
                                                                                                                           Q$ICP---000006
ALUOE:=:004000
A01 =:010000
BASE:=:********** GX:
                               BYTE4 = 000004
                                                                                            LOC:WB= 100000
LOD5M1 000726R
LOD5M3 000770R
                                                             BYTE91= 000133
BYTE92= 000134
                                                                                                                           Q$IHB = 000003
                               BYTE40= 000050
                                                                                                                           Q$IHRL= 000002
                               BYTE41 = . 000051
                                                              BYTE93 = . 000135
                                                                                                                      002.Q$IMRP=.000007
BINWD:=:******
                               BYTE42 = . 000052
                                                             BYTE94= 000136
                                                                                            L00P - ****** GX
                                                                                                                           Q$LBD = .001000
BITVAL = 000000
BIT0 = 000001
                               BYTE43 = . 000053
                                                             BYTE95= 000132
                                                                                            MAREN1 = . 000001
                                                                                                                           Q$LBDP= 001001
                               BYTE44= 000054
                                                              BYTE96 = 000140
                                                                                                                           Q$LBP - - 000001
                                                                                            MAREN2 = . 004000
BITI
          000002
                               BYTE45 = . 000055
                                                             BYTE97 = - 000141
                                                                                            MARLOD= 01900
                                                                                                                           Q$LDCD= 000003
BIT10
                               BYTE46= 000056
                                                             BYTE98= 000142
                                                                                            MAROUT = . 000002
                                                                                                                           Q$LDMD= 000004
          004000
BIT11
                               BYTE47 = . 000057
                                                                                            BYTE99= 000143
                                                                                                                           .Q$£DPP= 002000
                                                             BYTVAL = . 000144
UBKALL = . 001000
BIT12
          010000
                               BYTE48= 000060
                                                                                                                           .Q$LHP = 010000
Q$MNC = 140000
       -- 020000
BIT13
                              BYTE49= 000061
BYTE5 = 000005
                                                                                            MBKALL= 001000
          040000
                                                              CBKCLK= 000400
                                                                                            MBKCLK=-000400
MEND- =-*********** GX
                                                                                                                           0$MRP = 000052
Q$MRP = 000040
BIT15
       = 100000
                               BYTE50= 000062
                                                             CNOBRE = 100000
CODE · = · ****** GX-
                                                                                                                          U$FKP = 000040

Q$MRP2= 000240

Q$MSC = 04000

Q$MSET = 00004

Q$MSP = 100000
BIT2
        - 0000004
                               BYTE51 = . 000063
                                                                                            MMADRD = . 000100
          000010
                               BYTE52= 000064
BIT3
                                                             CPCCEN= 010000
                                                                                            MMLEFT= 000002
MMOE = 000004
                               BYTE53= 000005
          000020
                                                             CPREAD = 040000
CPURTE = 02000
BIT5
        = 0000046
                               BYTE54= 000066
                                                                                            MMURTE = . 000010
BIT6
          000100
                               BYTE55= 000067
                                                             CSADRD = 0000004
                                                                                            MNOBRE = 100000
                                                                                                                           Q$NCLK= 176000
BITZ
          000200
                              BYTE56 = . 000070
BYTE57 = . 000071
                                                                                            MREN1 = 000001
                                                                                                                    7.77.0$PP·= 000100
                                                              CSEQCI= 100000
                                                                                            MREN2 = 020000 . . . . MSTRT = ****** GX-
                                                             CSOE - 000040
                                                                                                                           Q$PPSW=-000320
Q$PP2-=-000300
Q$QHLT=-000013
BIT9
          001000
                               BYTE58= 000072
                                                             CSURTE = 000100
BUFSET= ****** GX
                               BYTE59= 000073
                                                             DATA1 = *******
                                                                                                      ***** £X.
                                                                                            MSTR2
BUFS3 = ****** GX
                              BYTE6 = 000006
BYTE60 = 000074
                                                             DATA2 - = · ******
                                                                                GX.
                                                                                            MSYN -
                                                                                                    = .000040
                                                                                                                           Q$QL
                                                                                                                                  = 000043
BYTE0 = 000000
BYTE1 = 000001
                                                             DATA3 = ******
                                                                                                      000144
                                                                                                                           Q$QLA - = - 000053
                               BYTE61= 000075
                                                             DBR:RD= 000001
                                                                                            PACK-
                                                                                                      жжжжжж
                                                                                                                           Q$QLB · = · 000054
BYTE10= 000012
                              BYTE62 = . 000076
BYTE63 = . 000077
                                                             DB$CPP= 001457
                                                                                            PDATA:
                                                                                                      · жжжжж GX ·
                                                                                                                           Q$QLR · = · 000001
BYTE!! = . 000013
                                                             DB$SPT= 000026
DB$TPC= 000023
                                                                                            PLB.
                                                                                                      000010
                                                                                                                           0.501.1
                                                                                                                                  = 0000042
BYTE12= . 000014
                               BYTE64= 000100
                                                                                            PLC.
                                                                                                                           Q$RDCD= 000005
BYTE13= 000015
                               BYTE65= 000101
                                                             DISPGS= 100000
                                                                                            PLD.
                                                                                                      · 000030
                                                                                                                           0$RDMD= 000006
BYTE14= 000016
                               BYTE66= 000102
                                                             DMAAWR = - 000005
                                                                                            PLRWR - = - 000200
                                                                                                                           0$REBK=:001000
BYTE15=-000017
BYTE16=-000020
BYTE17=-000021
                               BYTE67 = . 000103
                                                             DMARRD = . 000003
                                                                                            PLR.EN= 000200
                                                                                                                          Q$RNC. \(\frac{1}{2}\) 006000
\(\text{Q$RSC}\) \(\frac{1}{2}\) 004000
\(\text{Q$RSET}\) 00000
\(\text{Q$SP}\) \(\frac{1}{2}\) 000120
                               BYTE68= 000104
                                                             DMARWR = . 000004
                                                                                            QR$CR1=-176420
                               BYTE69= 000105
                                                             ENBR -
                                                                     = 010000
                                                                                            QR$CR2= 176422
BYTE18= 000022
                               BYTEZ = 000002
                                                             ERR11
                                                                     = - жокожожож
                                                                                            QR$LBR= 176424
BYTE19= 000023
BYTE2 = 000002
                               BYTE70= 000106
                                                                     = - жокономок GX
                                                             FRR4
                                                                                            Q$ATTH= 000100
                               BYTE71= 000107
                                                             ERR5
                                                                     = · ********* GX
                                                                                            Q$BCL - 000001
                                                                                                                           Q$SP2 - 000340
BYTE20= 000024
                               BYTE72= 000110
                                                             ERR7
                                                                        жэнжжж БХ
                                                                                            Q$CCCP= 000040
                                                                                                                           RGQ:EN= 000200
BYTE21=:000025
                               BYTE73= 000111
                                                             FIND
                                                                     = · ********* GX
                                                                                            Q$CHB = 000400
                                                                                                                           RGQ.VA= 020000
BYTE22= 000026
                               BYTE74= 000112
                                                                     = · *rtotototok GX
                                                                                            Q$CHRL = 000200
                                                             HANG
BYTE23= 000027
                                                                                                                           RP.

    жокококок

                               BYTE75= 000113
                                                             INCVAL = ******* GX
                                                                                            Q$CLR - = - 000040
                                                                                                                           RTNPT = жжжжжж GX
BYTE24= 000030
                              BYTE76= 000114
BYTE77= 000115
                                                             KILL.
                                                                     = · ********** GX
                                                                                                                           SCAN = ********* GX
                                                                                            Q$CNC -- 030000
BYTE25= 000031
                                                             LBSP
                                                                        жжжжж БХ
                                                                                            Q$CP
                                                                                                                           SDHIGH= ******* GX
SDLOU'= ****** GX
                                                                                                   = - 000060
                                                                                       BYTE26= 000032
                               BYTE78= 000116
                                                             1.05
                                                                        000030RG
BYTE27 = 000033
                               BYTE79= 000117
                                                             LD560-
                                                                       000362R
                                                                                                                           SEQ.CF= 000010
BYTE28=: 000034
                               BYTE8 = 000010
                                                             LD5LN -=
                                                                       000006 G
                                                                                                                           SPCR ·= ·******
BYTE29= 000035
                               BYTE80= 000120
                                                             LD50
                                                                        000352R
                                                                                                                          'SPSXX'=,***** GX
BYTE3 = 000003
                               BYTE81 = . 000121
                                                             LD5QB
                                                                        000312RG
                                                                                       002 · Q$CSET= · 000002
                                                                                                                           SQHIGH=' *******
BYTE30= 000036
                               BYTE82= 000122
                                                                                       002.Q$CSP
                                                             1 DSOR
                                                                        000322RG
                                                                                                   = 020000
                                                                                                                           SQLOW = ******* GX
SRHIGH= ******* GX
BYTE31 = - 000037
                               BYTE93=-000123
                                                             LD50X
                                                                        000302RG
                                                                                       002.Q$DMA.=
          000040
                               BYTE84= 000124
                                                             LD58
                                                                        000534R
                                                                                       002 · Q$ENBK = · 040000
                                                                                                                           SRLOW = ******** GX
BYTE33= 000041
                               BYTE85 = 000125
                                                             LDSSR
                                                                        000332RG
                                                                                       002 Q$ENOP = 020000
                                                                                                                           S$CLR = 000000
S$LA = 000001
BYTE34= 000042
                               BYTE86= 000126
                                                                        000516RG
                                                                                       002
                                                                                            ·Q$FAL·=·004000
BYTE35= 000043
                              BYTE87 = . 000127
                                                             LD552
                                                                                            .Q$FC.
                                                                                                      000045
                                                                                                                           S$0B
BYTE36 = · 000044
                               BYTE88= 000130
                                                                       000000RG
                                                                                       002.Q$FO
BYTE37= 000045
                                                                                                                           S$QR
                                                                                                                                     природ
                              BYTE89= 000131
                                                             LD5X
                                                                       000700R
                                                                                       002:0$FP
                                                                                                    = 000046
                                                                                                                           S$0X
                                                                                                                                   = .000004
BYTE38= 000046
                                           Approved For Release 2005/07/<u>4-2</u>
                              BYTE9 = AAAA11
                                                                                     A RDP85 005(4) R000200020001 35 $5 R.
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SPI D. b

4. W. MAN

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SPLD....MACRO.M1110 27-MAR-80 15:32 PAGE 7-2
 SYMBOL TABLE
                                                  Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
$$$1··=·000010
$$$2·=·000014
                                    T$IBE - = - 020000
                                                                        WORD17= 000042
                                                                                                            WORD46= 000134
                                    T$IBF - 040000
T$ICD - 000040
                                                                                                                                                WORD74= 000224
                                                                        WORD19= 000044
WORD19= 000046
                                                                                                            WORD47= 000136
 TD$CTR= 176370
                                                                                                                                                WORD75= 000226
                                                                                                                                               WORD76= 000230
WORD77= 000232
                                                                                                            WORD48 = . 000140
 TD$CTW= 176360
                                    T$MODE = 004000
                                                                        WORD2 - - 000004
 TD$INL = . 004000
                                                                                                            WORD49= 000142
                                            = 000036
                                                                        WORD20=-000050
WORD21=-000052
WORD22=-000054
                                                                                                            WORD5 = 000012
 TD$MEM= . 000270
                                                                                                                                                WORD78= 000234
                                    T$0BE · = · 004000
T$0BF · = · 010000
                                                                                                            WORD50 = 000144
 TD$0AR= 176344
                                                                                                                                                WORD79= 000236
                                                                                                            WORD51= 000146
TD$OTR=-176346
TD$QRD=-000274
TD$SW-=-176376
                                                                                                                                               WORD8 = 000020
WORD80= 000240
                                    T$0BRA= 000034
                                                                        WORD23= 000056
                                                                                                            WORD52= 000150
WORD53= 000152
                                    T$0BWA= 000032
                                                                        WORD24= 000060
WORD25= 000062
                                                                                                                                                WORD81= 000242
                                    T$0UTA= 100000
                                                                                                            WORD54= 000154
                                    T$RBDO = 000200
T$RNB = 000040
T$RSET = 040000
T$SC = 000022
 TD$TAR= 176372
                                                                                                                                                WORD82= 000244
                                                                        WORD26=-000064
                                                                                                            WORD55= 000156
 ID$TAU=:176362
                                                                                                                                               WORD83= 000246
                                                                        WORD27= 000066
                                                                                                            WORD56=-000160
                                                                                                                                               WORD84=_000250
WORD85=~000252
 iD$TDR= 176374
                                                                        WORD28= 000070
 /D$TDW=-176364

F$AD- =-000020

T$BA- =-000002
                                                                                                            WORD57= 000162
                                                                        WORD29= 000072
WORD3 = 000006
WORD30= 000074
                                                                                                            WORD58= 000164
                                                                                                                                               WORD86 = 000254/,
WORD87 = 000256
                                    T$SCLK= 020000
                                                                                                            WORD59= 000166
                                    T$SEG1=-000000
T$SEG2=-000001
                                                                                                            WORD6 = 000014
                                                                                                                                               WORD88=/000260
WORD89=-000262
 T$BD - = 000010
                                                                        WORD31= 000076
                                                                                                           WORD60= 000170
WORD61= 000172
 T$BSO - 100000
                                    T$SEG3= 000002
                                                                        WORD32=-000100
WORD33=-000102
WORD34=-000104
 T$BT.
        = 0000020
                                                                                                                                               WORD9 = 000022
                                    T$SO∙
                                             = 0000001
                                                                                                            WORD62= 000174
                                                                                                                                               WORD90= 000264
WORD91= 000266
 T$BTAR= 000030
                                    T$UBUS= 1000400
T$1CLK= 000400
                                                                                                           WORD63=-000176
WORD64=-000200
WORD65=-000202
T$BTD - - 002000
T$CD - 000100
                                                                        WORD35=-000106
WORD36=-000110
                                                                                                                                               WORD92= 000270
                                    T$8BEN= 000020
                                                                                                                                               WORD93=-000272
WORD94=-000274
 T$CLK = 002000
                                    UBD: IN= 000020
                                                                        WORD37 = . 000112
                                                                                                           WORD66= 000204
WORD67= 000206
T$DISK= 000200
T$DRD = 000004
                                    WORD1 = 000002
WORD1 = 000002
                                                                        WORD38=-000114
                                                                                                                                                WORD95= 000276
                                                                        WORD39= 000116
                                                                                                            WORD68= 000210
                                                                                                                                               WORD96=-000300
WORD97=-000302
 T$EMEM= 010000
                                    WORD10= 0000024
WORD11= 000026
                                                                        WORD4 = 000010
                                                                                                           WORD69-000212
 T$FSAA=:000000
                                                                       WORD40=-000120
WORD41=-000122
WORD42=-000124
                                                                                                           WORD7 = 000016
WORD70= 000214
T$FSAB= 000004
                                                                                                                                                WORD98= 000304
                                    WORD12=-000030
WORD13=-000032
T$FSAC=-000014
T$FSB2=-000010
T$IB- =-000026
                                                                                                                                               WORD99 - 000306
WRDVAL - 000310
XTREAD - 001000
                                                                                                           WORD71= 000216
WORD72= 000220
                                    WORD14= 000034
                                                                        WORD43=-000126
                                    WORD15= 000036
                                                                        WORD44= 000130
                                                                                                           WORD73= 000222
T$IBAR=.000024
                                                                                                                                               XTWRTE = . 000400
                                    WORD16= 000040
                                                                        WORD45= 000132
  ABS:
            имимия
                            000
            имимия
                            001
SPLD.
            001052
                            002
ERRORS DETECTED:
                          0
VIRTUAL MEMORY USED: 3456 WORDS ( 14 PAGES)
DYNAMIC MEMORY: 4916 WORDS ( 18 PAGES)
ELAPSED TIME: 00:00:46
```

SPLD, SPLD/-SP=[20,1]IM,[20,1]SPLD

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MACRO M1110 27-MAR-80 15.33 PAGE For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
SPPR-
                                                                      .FITLE - SPPR
.PSECT - SPPR
           000000
        23456789
                                                                      HARDWARE QUERY RESOLVER MANUAL DEBUGGING AIDS SUBDOCUMENT PROCESSOR TEST ROUTINES
                                                                      COMMANDS:
                                                                                 PRINT-SP-MEMORIES-
       10
       11
12
                                                                      ONCE:A:COMMAND:HAS:BBEN:EXECUTED (OR:AN:ERROR:ENCOUNTERED)
THIS:MODULE:RETURNS:CONTROL:TO:THE:MODULE:SP:AT:LOCATION:
       13
14
15
                                                                       SPXX1.
       16
17
18
19
                                                                      .MCALL WTSE$S,CLEF$S
       20
21
22
                                                                      \begin{tabular}{ll} TABLE \cdot OF \cdot VALID \cdot SP \cdot MEMORY \cdot MNEMONICS \cdot AND \cdot ADDRESSES \cdot OF \cdot THEIR \\ ASSOCIATED \cdot ROUTINES \cdot \\ \end{tabular} 
       23
           000000
                                                          PR5TBL::
      24
25
26
27
28
29
           000000
                                       130
                                                                      .ASCII-
                                                                                  Z0XZ
                                                                                                                     ;QEX-MEMORY
           000002
                      0003161
                                                                                 PR5QX
/SR/
                                                                      .WORD
           000004
000006
                           123
                                       122
                                                                      .ASCII.
                                                                                                                     ; SUBREAD : MEMORY 🚁
                       000346
                                                                      .WORD
                                                                                  PR5SR
           000010
                           123
                                       106
                                                                      .ASCII
                                                                                                                     :SDLB REA
           000012
                       000336
                                                                      .WORD
                                                                                 PR5QR
      30
31
           000014
                                       060
                                                                                  ZS0Z
                                                                                                                     ; SDLB · PAGE
           000016
                       000326
                                                                      .WORD
                                                                                 PR50B
      32
33
           000020
000022
                           123
                                       061
                                                                      .ASCII
                                                                                  ZS1Z
                                                                                                                     SIDMENT
                       000470
                                                                      .WORD
                                                                                 PR5S1
      34
35
36
37
38
39
40
           000024
                                       062
                                                                      .ASCII
                                                                                                                 STOMEM'2
                       000500
           000026
                                                                                 PR5S2
                                                                      .WORD
                       000030
                                                          PR5LN
                                                                                  <.-PR5TBL>
                                                                      PRINT.
      41
42
43
                                                                     PERFORM. THIRD LEVEL PARSING
                                                                     EG. IN-THE-COMMAND:
SP>PR-0X-0
PARSE-THE-10X1
       44
      45
46
      47
           000030
                                                          SPPR5::
      48
           000030
                                                                     CALL
                                                                                 FIND
                                                                                                                    ;LOCATE MEMORY MNEMONIC IN COMMAND LINE:
;OK, CONTINUE:
;MISSING OPERAND:
      49
50
51
52
53
54
55
          000034
000036
                       103004
                                                                     BCC
                                                                                 1$
                                                                     CALL
                                                                                 ERR4
           000042
                      000167
                                  000614
                                                                                                                     :EXIT-
                                                                     MATCH: THE: MNEMONIC: IN: THE: COMMAND: LINE: AGAINST: THE: TABLE: "" OF VALID: MNEMONICS:
                                                                                                         NUMBER OF TABLE ENTRIES
          000046 012700 000030
000052 012702 000000
      56
                                                          1$:
                                                                                 #PR5LN,R0
                                                Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3
```

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SPPR-
                                             5:33 PAGE 5-1
Approved For Release 2005/07/11 CIA-RDP85-00514R000200020001-3
                            27-MAR-80 15:33
                                                                             SCAN
                                                                                                              : MATCH - AGAINST - COMMAND - LINE
          000062
                     103004
                                                                                                              : MATCH WAS MADE
: * INVALID MEMORY MNEMONIC:
                                                                  BCC+
                                                                             2$
          000064
                                                                  CALL
                                                                             FRR7
      61
62
          000070
                     000167
                                000566
                                                                             PR5X
      63
                                                                  SAVE POINTER TO ROUTINE ASSOCIATED WITH THE MEMORY MINEMONIC SCAN THE REMAINDER OF THE COMMAND LINE FOR CONTROL INFORMATION:
      64
65
      66
                                                                      START ADDRESS ONLY: REPEAT PROMPT FOR EACH MEMORY LOCATION FROM THE START ADDRESS FORWARD: NB. END OF MEMORY (AS DETECTED BY THE MMAIN SUBGULTINE PDATA) OR A <<?
      67
      68
      69
70
71
72
73
74
75
77
                                                                      WILL TERMINATE THE LOAD.

SP>PR 0X 0

START ADDRESS, LOOP INDICATOR, LOOP ON THE LOADING OF
                                                                       THIS ONE MEMORY LOCATION ONLY.
                                                                      PROMPT AND FILL MEMORY (BETWEEN START AND END ADDRESSES)
                                                                      SP>PR:QW:0 7
      78
79
                                                                      START ADDRESS, END ADDRESS, LOOP INDICATOR, ISSUE ONLY ONE-PROMPT AND LOOP ON THE LOADING OF MEMORY (BETWEEN START)
                                                                      AND END ADDRESSES) WITH THIS VALUE. SP>PR-QW-0 7 L
      80
      81
      82
      83
          000074
      84
                     010167
                                ARREGEG.
                                                                             R1.RTNPT
                                                                                                              ; SAVE - POINTER -
          000100
                                                                  CALL
                                                                             FIND
                                                                                                              *LOCATE START ADDRESS IN COMMAND LINE
*OK CONTINUE
      86
          000104
                      103004
                                                                  BCC.
                                                                             345
      87
          000106
                                                                                                              : "MISSING OPERAND?"
                                                                  CALL
                                                                             ERR4
      88
          000112
                     000167
                                000544
                                                                  JMP
                                                                             PR5X
                                                                                                              :EXIT
                                                                                                              CONVERT COMMAND LINE VALUE TO BINARY
          000116
                                                       34:
                                                                  CALL
                                                                             PACK
      90
          000122
                     103004
                                                                 BCC -
                                                                             4$
                                                                                                              CONVERSION SUCCESSFUL:
      91
          000124
                                                                             EPP5
                                                                 CALL
      92
          000130
                     000167
                                ทิติติ526
                                                                             PR5X
      93
      94
95
          000134
                                000000G · 000000G · 4$:
                                                                                                              ;SAVE-LOADING-START-ADDRESS
;SAVE-IT-TWICE-(FOR-REFRESH-ON LOOP)
                                                                  MOV.
                                                                             BINWD, MSTRT
          000142
                     016767
                                000000G · 000000G
                                                                  MOV
                                                                             BINWD, MSTR2
      96
97
          000150
                     012767
                                177777
                                           DEBERGE
                                                                  MOV
                                                                             #-1.MEND
                                                                                                              : INIT END ADDRESS
                                                                 START ADDRESS HAS BEEN FOUND. SCAN FOR END ADDRESS OR LOOP INDICATOR (CONDITIONS 2, 3 ABOVE) IF THERE IS NOTHING FURTHER IN THE COMMAND LINE, CONDITION I IS IN EFFECT.
      98
      99
     100
     101
     102-000156
                                                                 CALL
                                                                             FIND
                                                                                                              :SCAN - COMMAND - LINE
     103
          000162
                     103004
                                                                 BCC
                                                                             5$
                                                                                                              SOMETHING THERE:
SET-END-ADDR:=-START-ADDR:
JUMP-TO-RTN-
     104 000164
                     016767
                                000000G · 000000G
                                                                 MOV
                                                                             MSTRT, MEND
     105
          000172
                     000445
                                                                             9$
     106
                                                                                                             000174
                                000114
                                                                             #*L,(R1)
                                                                 CMPB
     108
          000200
                     001011
                                                                 BNF.
                                                                             6$
     189
          000202
                     052767
                                000000G · 000000G
                                                                             #OUT, BASE
                                                                 BIS
          000210
     110
                     016767
                                000000G · 000000G
                                                                  MOV
                                                                             MSTRT, MEND
          000216
                                                                 CALL
BR
                                                                            HANG
    112-000222
113
                     000431
                                                                            9事
                                                                                                              ; JUMP - TO - RTH -
     114 000224
                                             Approved For Release 2005/07/12 : CIA-RDP85-0957480000200020001-30DRESS
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MACRO M1110 27+MAR-80 15:33 PAGE 5-2. Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
SPPR-
         115 000230
                                   103004
                                                                                                             BCC -- -
                                                                                                                                7$
                                                                                                                                                                                       OK, CONTINUE
         116
                 000232
                                                                                                             CALL.
                                                                                                                                ERR5
                                                                                                                                                                                       ; INVALID NUMERIC
                 000236
                                   000167
                                                     000420
                                                                                                              JMP .
                                                                                                                                                                                       :EXIT:
         118
         119
                                                                                                             SAVE-END-ADDRESS-(BINARY)
CHECK-FOR-LOOP-INDICATOR-AFTER-END-ADDRESS (CONDITION-4)
         121
         122-999242-
                                   016767
                                                      000000G · 000000G · 7$:
                                                                                                             MOV
                                                                                                                                BIHWD, MEND.
                                                                                                                                                                                      ;SET.UP.END.ADDRESS.
;CHECK.FOR LOOP.INDICATOR
;NO.LOOP.
         123
                  000250
                                                                                                              CALL
                                                                                                                                FIND
         124
125
                 000254
                                     103414
                                                                                                             BCS:
                                                                                                                                9$
                 00025€
                                    122711
                                                      000114
                                                                                                             CMPB.
                                                                                                                                #*L,(R1)
                                                                                                                                                                                       :CORRECT INDICATOR
         126
                 000262
                                   001404
                                                                                                             BEQ.
                                                                                                                                8$
                                                                                                                                                                                       ;YES, CONTINUE:
;LOOP.OPTION.ERROR
         127
                  000264
                                                                                                             CALL
                                                                                                                                ERR11
                 000270
000274
         128
                                   000167
                                                      000366
                                                                                                             .IMP
                                                                                                                               PR5X
         129
         130
                 000274
                                   052767
                                                      000000G · 000000G
                                                                                                             BIS
                                                                                                                                #OUT, HANG
                                                                                                                                                                                       :SET-OUTPUT-CONTROL
         131
                 000302
                                                                                                                               HANG
                                                                                                                                                                                       :HOW-TO-STOP-LOOP
         132
                 000306
         133
                                   016701
                                                      000000G
                                                                                           9$:
                                                                                                                               RTHPT.R1
                                                                                                                                                                                      :POINT.TO.ROUTINE
:JUMP.TO.ROUTINE.
                                                                                                             MOV-
         134 000312 000171
                                                      000000
                                                                                                             JMP
                                                                                                                                @(R1)
         135
         136
         137
                                                                                                             PRINT-QEX-MEMORY-
         138
         139
                 000316
                                    012767
                                                      000004 000000G PR5QX::
                                                                                                                                #S$Q×,CODE
                                                                                                             MOV
                                                                                                                                                                                      ;SET-MEMORY-SELECT-CODE - ∰ QEX
         140 000324
                                   000420
                                                                                                                                PR50
         141
         142
                                                                                                             PRINT-SDLB-PAGE-MEMORY
                                                                                                                                                                                                                            -a.a., 1887
         143
        144 000326
145 000334
                                   012767
                                                      000005 000000G PR5QB::
                                                                                                                                #S$QB,CODE
                                                                                                                                                                                       SET-MEMORY-SELECT-CODE - - SDLB PAGE
                                   000414
                                                                                                                                PR50
         146
         147
                                                                                                             PRINT-QLB-REFERENCE-PAGE
         148
         149
                 000336
                                                                                           PR5QR::
         150
                 000336
                                   012767
                                                      000006 000000G
                                                                                                             MOV
                                                                                                                                #S$QR,CODE
                                                                                                                                                                                      :SET-MEMORY-SELECT-CODE - = - REFERENCE - PAGE
         15 i
                 000344
                                   000410
                                                                                                                               PR50
         152
153
                                                                                                             PRINT SUBREAD MEMORY
         154
         155
                000346
                                                                                           PR5SR::
         156
                 000346
                                   012767
                                                      000007 000000G
                                                                                                             MOV:
                                                                                                                                #S$SR,CODE
                                   016746
016746
         157
                 000354
                                                      000000G
                                                                                                             MOV-
                                                                                                                                SRHIGH,-(SP)
                                                                                                                                                                                      :SUPPLY-UPPER-MEMORY LIMIT-
         158
                 00036B
                                                      000000G
                                                                                                                               SRLOW, -(SP)
                                                                                                             MOV
                                                                                                                                                                                       :LOWER.LIMIT.
         159
                 000364
                                   000404
                                                                                                                               PRSGO.
                                                                                                                                                                                                                                                           -
                                                                                                                                                                                                                                                                            , i
         160
                000366
                                                                                          PR50:
         161
                000366
                                   016746
                                                      000000G
                                                                                                                                                                                      :SUPPLY UPPER MEMORY LIMIT ...
                                                                                                             MOV.
                                                                                                                               SQHIGH,-(SP)
        162.000372
163 000376
                                   016746
                                                      000000G
                                                                                                             MOV:
                                                                                                                               SQLOW,-(SP)
                                                                                          PR5G0:
         164
                000376
                                                                                                             CALL
                                                                                                                               BUFSET.
                                                                                                                                                                                      ;PREPARE FOR PRINT
;OK, CONTINUE
;ERROR, EXIT
         165 000402
                                    103002
                                                                                                             BCC.
        166
                000404
                                   000167
                                                     000252
                                                                                                             JMP
                                                                                                                               PR5X
         167
         168
                000410
                                                                                           1$:
                                                                                                                                                                                     FREAD TENETH MENORY SERVICE WITH A SECOND SECOND SERVICE WITH A SECOND SEC
        169
                000410
                                                                                                             CALL
                                                                                                                               RD5M1
        170 000414
171 000422
                                   016767 000000G 000000G
                                                                                                             MGV.
                                                                                                                               DATA4, DATA1
                                                                                                             CALL
                                                                           Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3
```

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SPPR-

172 173 000426 174 000434 175 000442 176 000444 177 000452 ADD CMP BLOS BIT 066767 026767 000000G - 000000G -INCVAL, MSTR2 000000G-000000G-MSTR2, MEND 101762 032767 1\$ #LOOP,BASE 000000G - 0000000G 177 000452 178 000454 179 000460 001002 000167 016767 BNE 8\$ PR5X 000202 000000G-000000G-8\$: JMP : MOV : BR MSTRT, MSTR2 ;REINITIALIZE · ADDRESS 180 000466 000750 1\$

SPPR- MACRO M1110 27-MAR-80 15:33 Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3

```
182
                                                     PRINT-SIDMEM (MULTIPLE PAGES)
183
184 000470
185 000470
              012767
                        000010
                                 BRARAGE
                                                     MOV
                                                               #S$S1,CODE
                                                                                           ;SELECT-SIDMEM-1
    000476
186
              000403
                                                     BR
                                                              PR5S
187
    000500
188
    000500
              012767
                        000014
                                 000000G
                                                     MOV
                                                               #S$S2.CODE.
                                                                                            :SELECT-SIDMEM-2
189
    000506
                                           PR5S:
    000506
190
              016746
                        000000G
                                                     MOV.
                                                              SDHIGH, -(SP)
                                                                                            :SUPPLY-UPPER-MEMORY LIMIT
191
    000512
              016746
                        000000G
                                                     MOV.
                                                              SDLOW, - (SP)
                                                                                            :LOWER·LIMIT
                                                              BUFS3
192.000516
                                                     CALL
                                                                                            :PREPARE FOR READ
              103002
193
    000522
                                                     BCC
JMP
                                                                                            ;OK, CONTINUE
    000524
              000167
                        000132
                                                              PR5X
                                                                                            ;ERROR, EXIT
195
    000530
000530
196
197
                                                     SAVE
                                                              CODE
198
    000534
                                                     CALL
                                                              RD5M1
                                                                                            :READ · MEMORY · WORD · A ·
199
    000540
              016767
                        000000G · 000000G
                                                     MOV-
                                                              DATA4.DATA1
                                                                                            :SAVE FOR PRINTING
200
    000546
                                                     INC
                                                              CODE
                                                                                           :SELECT-WORD-B
:READ-MEMORY-WORD,:B. 近海点
201
    000552
                                                     CALL
                                                               RD5M1
202
    000556
              016767
                        000000G - 000000G
                                                                                           SAVE FOR PRINTING SELECT WORD CO. SELECT WORD CO. SELECT SAVE FOR PRINTING CO.
                                                     MGV.
                                                              DATA4.DATA2
203 000564
              005267
                                                              CODE
                                                     INC
294
    000570
                                                               RD5M1
                                                     CALL
    000574
205
              016767
                        000000G-000000G-
                                                     MOV
                                                               DATA4.DATA3
206
    000602
                                                     RESTOR
                                                              CODE
207
    000606
208
                                                     CALL
                                                               PRDATA
                                                                                            : PRINT - MEMORY - CONTENTS
209
    000612
                                                     BCC -
                                                               20$
                                                                                            :NOT-END-OF-MEMORY
:END-OF-MEMORY-
210
    000614
              000167
                        000042
                                                     JMP.
                                                               PR5X
211
    -000620
213
    000620
              066767
                        000000G-000000G
                                                                                           :BUMP ADDRESS
:HAS UPPER MEMORY LIMIT BEEN REACHED
                                                     ADD
                                                               INCVAL, MSTR2
214
    000626
              026767
101735
                        000000G 000000G
                                                     CMP
                                                               MSTR2, MEND
215
    000634
                                                                                            ; NO, CONTINUE
                                                     BLOS
                                                               1$
216
                                                               #LOOP, BASE
    000636
              032767
                        000000G · 000000G
                                                     BIT.
                                                                                            ;L00P.ON.
217
218
    000644
              001002
                                                     BNE
                                                               8$
                                                                                            :YES, CONTINUE
                        000010
    000646
              000167
                                                     JMP
                                                               PR5X
                                                                                            :REINITIALIZE ADDRESS
219
    000652
              016767
                        000000G.000000G.8$:
                                                     MOV.
BR
                                                               MSTRT, MSTR2
220
    000660
              000723
                                                               1$
221
222
223 000662
                                           PR5X:
    000662
              012746
                        000000
                                                     MOV.
                                                               #S$CLR,-(SP)
                                                                                            :CLEAR - SP -
225 000666
                                                     CALL
                                                               SPCR
                                                                                            ; WRITE - TO - CONTROL - REG
                                                                                            ;CLEAR · PROMPT · FLAG ·
;KILL · AST · (IF · THERE · WAS · ONE)
226 000672
              042767
                        ининдерия: ининина
                                                     BIC.
                                                               #<ONCE+OUT>,BASE
     000700
                                                     CALL
                                                               KILL
    000704
              000167
                                                               SPSXX
```

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THE RESERVE OF THE PROPERTY OF

27-MAR-80 15:33 PAGE 7 Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3 SPPR-0 · M1110 230 231 232 233 000710 234 000710 235 000714 236 000720 237 000734 238 000734 239 000734 240 000744 241 000744 242 000750 243 PRINT-SINGLE WORD-MEMORY-RD5M1: 012746 000001 MOV. #S\$LA,-(SP) CALL SPCR 016746 000000G $\text{MOV}\cdot$ CALL MOV LBSP 016746 000000G CODE,-(SP) ; SELECT · MEMORY · CALL SPCR :DO·SP·TO·LOD·BUS :FETCH·DATA· CALL MOV-SPLB 012667 000000G (SP)+,DATA4 RETURN

.END

000001

```
MACRO M1110 27-MAR-80 15:33 PAGE 7-1
Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
  SYMBOL TABLE
  ALUCKE = . 040000
                                                              BYTE39= 000047
                                                                                                                          BYTE90=-000132
                                                                                                                                                                                      MMADRD≈.000100
 ALUOE: =:004000
A01 =:010000
BASE: =:********* GX:
                                                                                                                                                                                                                                                   Q$ICP -- 000006
                                                              BYTE4 = 0000004
                                                                                                                          BYTE91 = 000133
                                                                                                                                                                                      MMLEFT= 000002 MM0E - - 000004
                                                                                                                                                                                                                                                   Q$IHB -- 000003
                                                              BYTE40= 000050
                                                                                                                          BYTE92=-000134
BYTE93=-000135
 BASE -
                                                                                                                                                                                                                                                   Q$IHRL= 000002
                                                              BYTE41 = . 000051
                                                                                                                                                                                       MMWRTE = . 000010
 BINUD = ****** GX
                                                                                                                                                                                                                                                   Q$IMRP=.000007
                                                              BYTE42= 0000052
                                                                                                                          BYTE94= 000136
                                                                                                                                                                                       MNOBRE = 100000
                                                                                                                                                                                                                                                   Q$LBD -- 00100<u>0</u>
 BITVAL = 000000
                                                              BYTE43 = - 000053
                                                                                                                          BYTE95= 000137
                                                                                                                                                                                      MREN1 = 000001
                                                                                                                                                                                                                                                   Q$LBDP=.001001
 BIT0 = 000001
BIT1 = 000002
                                                              BYTE44= 000054
                                                                                                                          BYTE96= 000140
                                                                                                                                                                                       MREN2 - - 020000
                                                                                                                                                                                                                                                   Q$LBP - - 000001
                                                              BYTE45= 000055
                                                                                                                          BYTE97=-000141
                                                                                                                                                                                      MSTRT - - ***** GX
 BITi0
                = 002000
                                                                                                                                                                                                                                                  Q$LDCD= 000003
                                                             BYTE46 = . 000056
BYTE47 = . 000057
                                                                                                                          BYTE98= 000142
                                                                                                                                                                                      MSTR2 - - ***** GX
                                                                                                                                                                                                                                                  Q$LDMD= 000004
 BITii
                = 004000
                                                                                                                          BYTE99= 000143
                                                                                                                                                                                      MSYN - 000040
                                                                                                                                                                                                                                                  Q$LDPP= 002000
 BIT12 · ≈ · 010000
                                                              BYTE48= 000060
                                                                                                                          BYTVAL = 000144
CBKALL = 001000
                                                                                                                                                                                                     = 000144
 BIT13 = 020000
                                                                                                                                                                                                                                                  Q$LHP - = - 010000
                                                              BYTE49= 000061
                                                                                                                                                                                      ONCE -
                                                                                                                                                                                                     = · ******* GX
                                                                                                                                                                                                                                                  Q$MNC = 140000
Q$MR = 000052
Q$MRP = 000040
                = 040000
  BIT14
                                                             BYTE5 = 000005
BYTE50= 000062
                                                                                                                          CBKCLK = . 000400
                                                                                                                                                                                      DUT:
                                                                                                                                                                                                     =·******* GX
                = 100000
= 000004
 BIT15
                                                                                                                          CHOBRE = 100000
                                                                                                                                                                                      PACK-
                                                                                                                                                                                                     =·***** GX
  BIT2.
                                                              BYTE51 = . 000063
                                                                                                                         CODE: =: ******* GX: CPCCEN=:010000
                                                                                                                                                                                                                                                  Q$MRP2= 000240
Q$MSC = 040000
                                                                                                                                                                                      PLB.
                                                                                                                                                                                                     = 0000010
                 = 0000010
  BIT3
                                                             BYTE52= 000064
BYTE53= 000065
                                                                                                                                                                                      PLC.
                 --000020
                                                                                                                          CPREAD = 040000
                                                                                                                                                                                      PLD.
                                                                                                                                                                                                     = 000030
                                                                                                                                                                                                                                                  Q$MSET= 000004
 BIT5
                = 000040
                                                              BYTE54= 0000066
                                                                                                                          CPWRTE = - 020000
                                                                                                                                                                                      PLRWR - = - 000200
                                                                                                                                                                                                                                                  Q$MSP - - 100000
                 =·000100
                                                              BYTE55= 000067
                                                                                                                         CSADRD= 000004
CSEQCI= 100000
CSOE = 000040
CSWRTE= 000100
 BITS
                                                                                                                                                                                      PLR.EN= 000200
                                                                                                                                                                                                                                                Q$NCLK= 176000
Q$NCLK= 176000
Q$PP = 000100
Q$PPSW= 000320 ....
Q$PPSW= 1000320 ....
Q$Q$HLT=2000013**
                =·000200
 BIT7
                                                             BYTE56 = 000070
BYTE57 = 000071
                                                                                                                                                                                      PRDATA= ****** GX
 BIT8.
                                                                                                                                                                                      PRSGO.
                                                                                                                                                                                                         000376R
 BIT9
                = 001000
                                                              BYTE58= 0000072
                                                                                                                                                                                     PR5LH =
                                                                                                                                                                                                         -000030 G
 BUFSET= ****** GX
                                                              BYTE59= .000073
                                                                                                                         DATA1 = · ****** GX · DATA2 · = · ****** GX ·
                                                                                                                                                                                      PR50
                                                                                                                                                                                                          000366R
 BUFS3 = ******* GX
                                                                                                                                                                                                                                        992
                                                             BYTE6 = 000006
                                                                                                                                                                                      PR5QB
                                                                                                                                                                                                                                                 Q$QL = 000043%
Q$QLA = 000053/
                                                                                                                                                                                                          000326RG
                                                                                                                                                                                                                                        002
 BYTE0 = 000000
                                                             BYTE60= 000074
                                                                                                                          DATA3 = xxxxxxxx GX
                                                                                                                                                                                      PPSOP
                                                                                                                                                                                                          000336RG
                                                                                                                                                                                                                                        002
 BYTE1 = 000001
                                                             BYTE61= 000075
                                                                                                                          DATA4 = ****** GX
                                                                                                                                                                                      PR50X
                                                                                                                                                                                                                                                 000316RG
                                                                                                                                                                                                                                        002
 BYTE10= 000012
                                                              BYTE62= 000076
                                                                                                                         DBR.RD= 000001
DB$CPP= 001457
                                                                                                                                                                                      PR5S
                                                                                                                                                                                                          000506R
                                                                                                                                                                                                                                        002
 BYTE11= 000013
                                                             BYTE63= 000077
                                                                                                                                                                                      PR5SR
                                                                                                                                                                                                          000346RG
 BYTE12= 000014
                                                                                                                                                                                                                                        002
                                                             BYTE64= 000100
BYTE65= 000101
                                                                                                                          DB$SPT= 000026
                                                                                                                                                                                     PR5S1
                                                                                                                                                                                                          000470RG
                                                                                                                                                                                                                                        002
                                                                                                                                                                                                                                                 Q$RDCD= 000005
 BYTE13=-000015
                                                                                                                         DB$TPC= 000023
DISPGS= 100000
DMAAWR= 000005
                                                                                                                                                                                      PR5S2
                                                                                                                                                                                                         000500RG
                                                                                                                                                                                                                                                 Q$RDMD= . 000006
 BYTE14= 000016
                                                             BYTE66= 000102
                                                                                                                                                                                      PR5TBL
                                                                                                                                                                                                         000000RG
                                                                                                                                                                                                                                       002
                                                                                                                                                                                                                                                 Q$REBK= 001000
 BYTE15= 000017
                                                             BYTE67=-000103
                                                                                                                                                                                      PR5X
                                                                                                                                                                                                                                                 Q$RNC = 006000
Q$RSC = 004000
                                                                                                                                                                                                          000662R
 BYTE16= 000020
                                                                                                                                                                                                                                       002
                                                             BYTE68= 000104
                                                                                                                          DMARRD = . 000003
                                                                                                                                                                                      QR$CR1=-176420
 BYTE17= 000021
                                                             BYTE69= 000105
BYTE7 = 000007
                                                                                                                         DMARWR = - 000004
                                                                                                                                                                                                                                                 Q$RSET= 000010
Q$SM = 100000
Q$SP = 000120
                                                                                                                                                                                      QR$CR2=:176422
BYTE18= 000022
BYTE19= 000023
                                                                                                                         ENBR: = 010000
ERR11 = ********* GX
                                                                                                                                                                                     QR$LBR= 176424
                                                             BYTE70= 000106
                                                                                                                                                                                      Q$ATTN= 000100
 BYTE2 = 000002
                                                            BYTE71= 000107
BYTE72= 000110
                                                                                                                         ERR4 = ****** GX
                                                                                                                                                                                                                                                 Q$SP2:=-000340
RD5M1 000710R:
                                                                                                                                                                                     Q$BCL = 000001
Q$CCCP= 000040
 BYTE20=-000024
                                                                                                                         ERR5
                                                                                                                                        =·***** GX
BYTE21=-000025
BYTE22=-000026
                                                             BYTE73= 000111
                                                                                                                                                                                                                                                                                                    002
                                                                                                                         FRR7
                                                                                                                                        = · ****** GX
                                                                                                                                                                                     Q$CHB - - 00040
                                                                                                                                                                                                                                                 RGQ.EN= 000200
                                                             BYTE74= 000112
                                                                                                                         FIND.
                                                                                                                                       =·********* GX:
                                                                                                                                                                                      Q$CHRL= 000200
 BYTE23= 000027
                                                                                                                                                                                                                                                 RGQ:VA= 020000
                                                            BYTE75= 000113
BYTE76= 000114
                                                                                                                         HANG-
                                                                                                                                        = · ********* GX
                                                                                                                                                                                                                                                 RTNPT = ******* GX**
SCAN = ******* GX**
                                                                                                                                                                                     Q$CLR - = - 000040
 BYTE24= 000030
                                                                                                                          INCVAL= · ***** GX
                                                                                                                                                                                     Q$CNC = 030000
Q$CP = 000060
 BYTE25= 000031
                                                             BYTE77= 000115
                                                                                                                        KILL: = ********* GX
LBSP: = ******** GX
 BYTE26 = . 000032
                                                                                                                                                                                                                                                 BYTE78= 000116
                                                                                                                                                                                     Q$CPCC= 000010
 BYTE27 - 000033
                                                                                                                                                                                                                                                 SDLOW- - ****** GX
                                                            BYTE79= 000117
BYTE8 = 000010
                                                                                                                         LOC.EN= 000100
                                                                                                                                                                                     Q$CP2 -- 000260
Q$CSC -- 010000
                                                                                                                                                                                                                                                 SEQ.CI= 000010
 BYTE28= · 000034
                                                                                                                        LOC.WA= 040000
'LOC.WB= 100000
LOOP = ********* GX-
                                                                                                                                                                                                                                                 SEU: U1 = 000010

SPCR = ******** GX.

SPLB = ******* GX.

SPPRS 000030RG

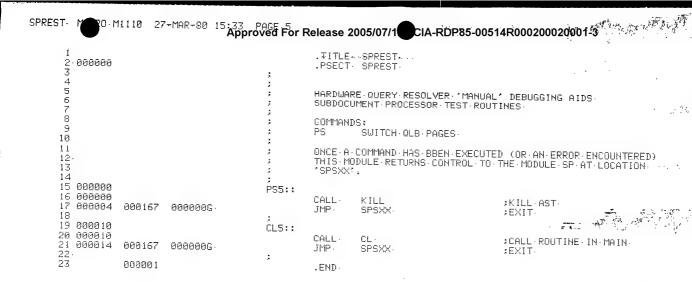
SPSXX = ******* GX.
 BYTE29= 0000035
                                                             BYTE80= 000120
                                                                                                                                                                                    Q$CSEL= 000360
Q$CSET= 000002
Q$CSP-= 020000
 BYTE3 = 000003
                                                             BYTE81 - 000121
BYTE30= 000036
                                                                                                                         MAREN 1 = 000001
                                                                                                                                                                                                                                                                                                   002.
 BYTE31= 000037
                                                             BYTE83= . 000123
                                                                                                                         MAREN2 = 004000
                                                                                                                                                                                    Q$DMA:=:000001
                                                                                                                                                                                                                                                 SQHIGH= ****** GX
BYTE32 - 000040
BYTE33 - 000041
                                                             BYTE84= 000124
                                                                                                                        MARLOD = 010000
MAROUT = 000002
                                                                                                                                                                                     Q$ENBK = . 040000
                                                                                                                                                                                                                                                 SQLOW = ******* GX
                                                             BYTE05 = . 000125
                                                                                                                                                                                     Q$ENOP = 020000
                                                                                                                                                                                                                                                 SRHIGH= · ********** GX
SRLOW = · ********** GX
 BYTE34= 000042
                                                             BYTE86= AAA126
                                                                                                                         MAR.LO= 002000
                                                                                                                                                                                    Q$FAL -- 004000
Q$FC -- 000045
BYTE35 = . 000043
                                                             BYTE87= 000127
                                                                                                                         MAR.OU= 000040
BYTE36= 000044
                                                                                                                                                                                                                                                - Sacura - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 1980 - 198
                                                            BYTE88= 000130
                                                                                                                        MBKALL= 001000
MBKCLK= 000400
                                                                                                                                                                                     Q$F0
                                                                                                                                                                                                         000044
BYTE37= 000045
                                                            BYTE89= 000131
                                                                                                                                                                                     Q$FP
                                                                                                                                                                                                   = 0000046
                                                                                                                                                                                                                                                 S$QB
                                                                                                                                                                                                                                                              = 000005
BYTE38= 000046
                                                                                                                                                                                                                                                                                                 a_{ij} = c_{ij} a_{ij} a_{ij
                                                            BYTE9 = . 000011
                                                                                                                        MEHD.
                                                                                                                                                                   0$HBF = 000002
CIA-RDP85-00514R000200020001-3
                                                                                                                                                                                                                                                                - 000006
                                                                                     Approved For Release 2005/07/1
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SPPR
S$QX- = 0000004
                                  T$IB
                                          = 0000026
                                                                   WORD15= 000036
                                                                                                     WORD44= 000130
                                                                                                                                      WORD73=-000222
WORD74=-000224
WORD75=-000226
S$SR· = 0000007
                                  T$IBAR=:000024
                                                                   WORD16= 000040
WORD17= 000042
                                                                                                     WORD45 = 000132
                                  T$IBE - 020000
T$IBF - 04000
5$84
       = 0000010
                                                                                                    WORD46= 000134
WORD47= 000136
        = 000014
S$S2
                                                                   WORD18 - 000044
                                                                                                                                      WORD76= 000230
TD$CTR=-176370
                                  T$ICD - = .000040
                                                                   WORD19=-000046
WORD2-=-000004
                                                                                                     WORD48= 000140
                                                                                                                                      WORD77=-000232
WORD78=-000234
WORD79=-000236
TD$CTW= 176360
TD$INL= 004000
                                  T$MODE = . 004000
                                                                                                    WORD49=.000142
                                  T$0B - - 000036
                                                                   WORD20= 000050
                                                                                                    WORD5 = 000012
WORD50= 000144
                                  T$08E · = · 004000
TD$MEM= 000270
                                                                   WORD21 = 000052
                                                                                                                                      WORD8 = 000020
TD$OAR=-176344
                                  T$08F · = · 010000
                                                                   WORD22=-000054
WORD23=-000056
WORD24=-000060
                                                                                                     WORD51= 000146
                                                                                                                                      WORD80= 000240
WORD81= 000242
TD$0TR=-176346
                                  T$0BRA= 000034
                                                                                                     WORD52=-000150
TD$QRD= 000274
                                  T$0BWA= 000032
T$0UTA= 100000
                                                                                                    WORD53= 000152
WORD54= 000154
                                                                                                                                      WORD82= 000244
TD$SW---176376
                                                                   WORD25 - 000062
WORD26 - 000064
                                                                                                                                      WORD83= 000246
WORD84= 000250
TD$TAR= . 176372
                                  T$RBDO=∙000200
                                                                                                    WORD55= 000156
                                  T$RNB = 000040
T$RSET= 040000
T$SC = 000022
TD$TAW= 176362
                                                                   WORD27= 000066
                                                                                                    WORD56= 000160
WORD57= 000162
                                                                                                                                      WORD85 - 000252
TD$TDR= 176374
                                                                   WORD28= 000070
WORD29= 000072
                                                                                                                                      WORD86= 000254
WORD87= 000256
TD$TDW≕-176364
                                                                                                    WORD50= 000164
T$AD - - 0000020
T$BA - - 000002
                                  T$SCLK= 020000
                                                                   WORD3 = 000006
                                                                                                    WORD59= 000166
WORD6 = 000014
                                                                                                                                      WORD88= 000260
-- 000002
T$BD: =-000010
T$BSO:=-100000
T$BT: =-00000
                                  T$SEG1 = . 000000
                                                                   WORD30= 000074
                                                                                                                                      WORD89 = 000262
WORD9 = 000022
                                  T$SEG2= 000001
                                                                   WORD31= 000076
WORD32= 000100
                                                                                                     WORD60= 000170
                                  T$SEG3=-000002
                                                                                                    WORD61=-000172
                                                                                                                                      WORD90= 000264
                                  T$SO· = 0000001
                                                                   WORD33=-000102
                                                                                                    WORD62= 000174
                                                                                                                                      WORD91=-000266
T$BTAR= 000030
                                  T$UBUS= 100000
                                                                   WORD34=-000104
WORD35=-000106
WORD36=-000110
                                                                                                    WORD63= 000176
                                                                                                                                      WORD92= 000270
WORD93= 000272
T$BTD - = -002000
T$CD - = -000100
                                  T$1CLK= 000400
                                                                                                     WORD64= 000200
                                  T$8BEN= 000020
                                                                                                    WORD65= 000202
                                                                                                                                      WORD94= 000274
T$CLK · = · 002000
                                  UBD: IH= 000020
                                                                   WORD37= 000112
                                                                                                    WORD66=-000204
WORD67=-000206
                                                                                                                                      WORD95= 000276
T$DISK= 000200
                                  WORD0 = 000000
WORD1 = 000002
                                                                   WORD38=-000114
                                                                                                                                      WORD96 = 000300
WORD97 = 000302
T$DRD - = - 000004
                                                                   WORD39 = . 000116
                                                                                                     WORD68= 000210
T$EMEM= 010000
                                  WORD10= 000024
                                                                   WORD4 = 000010
                                                                                                    WORD69= 000212
WORD7 = 000016
                                                                                                                                      WORD98= 000304
T$F$AA= . 000000
                                  WORD11= 000026
                                                                   WORD40=-000120
                                                                                                                                      WORD99 = 000306
T$FSAB= 000004
                                  WORD12= 000030
                                                                   WORD41= 000122
WORD42= 000124
                                                                                                    WORD70= 000214
                                                                                                                                      WRDVAL = - 000310
T$F$AC=-000014
                                  WORD13=-000032
                                                                                                    WORD71= 000216
                                                                                                                                      XTREAD= 001000
T$F$B2=-000010
                                 WORD14= 0000034
                                                                   WORD43 = 000126
                                                                                                    WORD72= 000220
                                                                                                                                      XTWRTE = . 000400
. ABS.
           000000
                          000
           000000
                           001
SPPR
           000752
                          002
ERRORS DETECTED:
VIRTUAL · MEMORY · USED:
                              3411 WORDS: (-14 PAGES)
DYNAMIC MEMORY: 4916 WORDS: (18 PAGES)
ELAPSED TIME: 00:00:46

>PPR,SPPR/-SP=[20,1]IM,[20,1]SPPR
```

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        SPREST
        MACRO M1110
        27-MAR-80
        15:33
        PAGE 5-1

        SYMBOL TABLE
        Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3

ALLICKE - 949999
                                BYTE42= 0000052
                                                                BYTE94=-000136
                                                                                                QR$LBR=-176424
Q$ATTN=-000100
ALU0E - 004000
A01 = 010000
                                                                                                                                          100000
                                BYTE43 = 000053
                                                                BYTE95= 000137
BYTE96= 000140
                                                                                                                               Q$SP = -
                                                                                                                                          000120
                                BYTE44= 000054
                                                                                                Q$BCL - - 000001
                                                                                                                                          000340
BITVAL = . 000000
                                BYTE45= 000055
                                                                BYTE97 = . 000141
                                                                                                Q$CCCP= 000040
                                                                                                                                RGQ.EN= 000200
51T0 = 000001
::IT1 = 000002
                                BYTE46= 000056
BYTE47= 000057
                                                                BYTE98= 000142
                                                                                                Q$CHB · = · 000400
                                                                                                                                RGQ.VA= 020000
                                                                BYTE99=-000143
                                                                                                Q$CHRL= 000200
                                                                                                                                SEQ.CI= 000010
BITIO
       = 002000
                                BYTE48= 000060
                                                                BYTVAL = . 000144
CBKALL = . 001000
                                                                                                Q$CLR - = 000040
                                                                                                                                SPSXX = ***** GX
BIT11 = 004000
BIT12 = 010000
                                BYTE49= 000061
                                                                                                Q$CNC - = - 030000
                                                                                                                                S$CLR - = -
                                                                                                                                          000000
                                BYTE5 = 000005
                                                                CBKCLK = . 000400
                                                                                                Q$CP
                                                                                                       = 0000060
                                                                                                                                S$LA
                                                                                                                                       = 000001
= 000005
BIT13
       = 020000
                                BYTE50 = . 000062
                                                                CL
CL5
                                                                       = · ******
                                                                                                Q$CPCC= 000010
                                                                                                                                9$08
                                                                                                                                          000005
        = . 040000
                                BYTE51= 000063
BIT14
                                                                          000010RG
                                                                                          002 · Q$CP2 · = · 000260
Q$CSC · = · 010000
                                                                                                                                S$QR
                                                                                                                                        = . 000006
       =·100000
BIT15
                                BYTE52=:000064
                                                                CHOBRE = 100000
                                                                                                                                       = 000004
= 000007
                                                                                                                                S$QX
        = 0000004
BIT2.
                                BYTE53 = . 000065
                                                                CPCCEN=-010000
                                                                                                Q$CSEL = . 000360
                                                                                                                                S$SR
        = 000010
BIT3
                                BYTE54= . 000066
                                                                CPREAD = . 040000
                                                                                                Q$CSET=-000002
                                                                                                                                S$S1
                                                                                                                                        - 000010
BIT4
        = 0000020
                                BYTE55= 000067
                                                                CPWRTE = : 020000
                                                                                               Q$CSP·=·020000
Q$DMA·=·000001
                                                                                                                                S$S2
                                                                                                                                          000014
BIT5
        = 000040
                                BYTE56= 000070
                                                                CSADRD = . 000004
                                                                                                                                TD$CTR=-176370
        = 000100
BIT6
                                BYTE57 = . 000071
                                                                CSEQCI = 100000
                                                                                                Q$ENBK = . 040000
                                                                                                                               TD$CTW= 176360
TD$INL = 004000
BIT7
          000200
                                BYTE58 = . 000072
                                                                CSOE - - 000040
CSWRTE - 000100
                                                                                                Q$ENOP= 020000
BIT8
        = · 000400
                                BYTE59= 000073
                                                                                                Q$FAL - = - 004000
                                                                                                                                TD$MEM= 000270
                                                                DBR.RD= 000001
DB$CPP= 001457
BIT9
        = 001000
                                BYTE6 = 000006
                                                                                                                               TD$OAR = 176344
TD$OTR = 176346
TD$OTR = 176346
TD$ORD = 10002741
TD$SW = 176376
                                                                                                       = 999945
                                                                                                OSFC:
BYTE@
        = 000000
                                BYTE60= 000074
                                                                                                Q$F0
                                                                                                       = 000044
       = - 000001
BYTE I
                                BYTE61= 000075
                                                                DB$SPT= 000026
                                                                                                Q$FP.
                                                                                                       = 000046
                                BYTE62= 000076
BYTE10=-000012
                                                                DB$TPC=:000023
                                                                                               Q$HBF - = - 000002
BYTE11= 000013
                                BYTE63= 000077
                                                                DISPGS= 100000
                                                                                                Q$ICP - 000006
                                                                                                                                TD$TAR≕ 176372.
BYTE12= 000014
                                BYTE64= 000100
                                                                DMAAUR = - 0000005
                                                                                                Q$IHB - - 000003
                                                                                                                                TD$TAW= 176362
BYTE13= 000015
                                BYTE65= 000101
                                                                DMARRD = . 000003
                                                                                                Q$IHRL= 000002
                                                                                                                                TD$TDR=+176374
3YTE14= 000016
8YTE15= 000017
                                BYTE66= 000102
                                                                DMARWR = . 000004
                                                                                               Q$IMRP=.000007
Q$LBD.=.001000
                                                                                                                                TD$TDW= 176364
                                                                DIMKWK--00000.
ENBR: =:010000
KILL: =:****** GX
                                BYTE67=-000103
                                                                                                                                T$AD = 000020
T$BA = 000002
T$BD = 000010
BYTE15- 000020
BYTE17- 000021
                                BYTE68 = . 000104
                                                                                                Q$LBDP=-001001
                                                                LOC.EN= 000100
LOC.WA= 040000
                                BYTE69= 000105
                                                                                                Q$LBP - - 000001
DYTE18= 000022
                                BYTE7 = 000007
                                                                                                Q$LDCD= 000003
                                                                                                                               T$BSO = 100000
T$BT = 000020
T$BTAR= 000030
3YTE19=-000023
                                BYTE70=:000106
                                                                LOC.WB= 100000
MAREN1= 000001
                                                                                                Q$LDMD= 000004
JYTE2 = 000002
                                BYTE71= 000107
                                                                                                Q$LDPP= 002000
JYTE20= 000024
                                BYTE72= 000110
                                                                MAREH2 = . 004000
                                                                                               Q$LHP - = - 010000
Q$MNC - = - 140000
                                                                                                                                T$BTD - - 002000
BYTE21= 000025
                                BYTE73= 000111
                                                                MARLOD= 010000
                                                                                                                                T$CD = 000100
JYTE22= 000026
                                BYTE74= 000112
                                                                MAROUT = 000002
                                                                                                Q$MR · = · 000052
                                                                                                                                T$CLK = 002000
BYTE23= 000027
                                BYTE75= 000113
BYTE76= 000114
                                                                MAR.LO= 002000
                                                                                                Q$MRP - = - 000040
                                                                                                                               T$DISK=-0002000
T$DRD-=-000004
BYTE24= 0000030
                                                                MAR.OU= 000040
                                                                                                Q$MRP2= 000240
                                BYTE77= 000115
DYTE25= 000031
                                                                MBKALL = . 001000
                                                                                                Q$MSC - = 040000
Q$MSET = 000004
Q$MSP - = 100000
                                                                                                                                T$EMEM= -010000
BYTE26 = . 000032
                                BYTE78= 000116
                                                                MBKCLK = · 000400
                                                                                                                                T$FSAA= - 0000000°
BYTE27≈ 000033
                                BYTE79=-000117
                                                                MMADRD = 000100
                                                                                                                                T$FSAB=:000004
T$FSAC=:000014
BYTE28= 000034
                                                                MMLEFT= 000002
MMOE = 000004
                                BYTE8 = 000010
                                                                                                Q$NCLK= 176000
BYTE29= 0000035
                                BYTE80= 000120
                                                                                                                                T$FSB2= 000010
                                                                                                Q$PP
                                                                                                       = 000100
BYTE3 = 000003
BYTE30= 000036
                                                                                                Q$PPSW= 000320
                                BYTE81= 000121
                                                                MMWRTE = . 000010
                                                                                                                                T$IB = 000010
T$IB = 000026
T$IBAR=7000024
T$IBF = 020000
T$IBF = 040000
                                BYTE82= 000122
                                                                MNOBRE = 100000
                                                                                                Q$PP2 = 000320
BYTE31= 0000037
                                BYTE83=-000123
                                                                MREN1 = 000001
MREN2 = 020000
                                                                                                Q$QHLT= 000013
BYTE32= 0000040
                                BYTE84= 000124
                                                                                                Q$QL.
                                                                                                       = 000043
BYTE33 = - 000041
                                BYTE85= 000125
                                                                MSYN - 000040
                                                                                                Q$QLA:=:000053
                                                                                                                                T$ICD:=:000040
BYTE34= 000042
                                BYTE86=:000126
                                                                       = 000144
                                                                                                Q$QLB - - 000054
                                                                                                                                T$MODE = - 004000
BYTE35= 000043
                                BYTE87 = . 000127
                                                                PLB.
                                                                       = 000010
= 000020
                                                                                                Q$QLR. = .000001
                                                                                                                                T$0B = 000036
T$0BE = 004000
T$0BF = 010000
8YTE36= 000044
                                BYTE88= . 000130
                                                                PLC.
                                                                                                Q$QW- = 000042
BYTE37= 000045
                                                                PLD = 000020
PLRUR = 000200
                                BYTE89= 000131
                                                                                                Q$RDCD= 000005
BYTE38= 000046
                                BYTE9 = 000011
                                                                                                Q$RDMD = . 000006
                                                                                                                                T$0884=.000034
                                                                PLR.EN= 000200
BYTE39= 000047
                                BYTE90 = . 000132
                                                                                                                               T#08UA- ,0000327
                                                                                          0$REBK = 001000
002 · Q$RNC = 006000
BYTE4 = 000004
                                BYTE91 = . 000133
                                                                         000000RG
BYTE40= 000050
                                BYTE92=:000134
                                                                QR$CR1=-176420
                                                                                                Q$RSC - - 004000
                                                                                                                                T$RBD0=-000200
BYTE41 = . 000051
                                BYTE93= 000135
                                                                QR#CR2•
                                                                                                                                T$RNB - = - 000040
                                                                                      CIA-RDP85-00514R000200020001-3
                                            Approved For Release 2005/07/12
```

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SPREST- M
SYMBOL TA
                               27-MAR-80 15:33 PAGE:5-2
                                                   Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
T$RSET= 040000
                                     WORD2 - - 000004
                                                                         WORD40=-000120
                                                                                                              WORD61= 000172
                                                                                                                                                   WORD82=+000244
WORD83=+000246
WORD84=±000250
T$SC+ = 000022
T$SCLK= 020000
                                                                         WORD41= 000122
WORD42= 000124
                                     WORD20=-000050
                                                                                                              WORD62= 000174
                                     WORD21= 000052
                                                                                                              WORD63=.000176
T$SEG1 = 000000
T$SEG2 = 000001
                                     WORD22=-000054
                                                                         WORD43= 000126
                                                                                                              WORD64=-000200
WORD65=-000202
                                                                                                                                                   WORD85=:000252
                                    WORD23=-000056
WORD24=-000060
                                                                         WGRD44=-000130
                                                                                                                                                   WORD86= 000254
T$SEG3= 000002
                                                                         WORD45= 000132
                                                                                                              WORD66= 000204
                                                                                                                                                  WORD87=.000256
WORD88=.000260
                                     WORD25=-000062
                                                                         WORD46= 000134
                                                                                                              WORD67=-000206
T$UBUS= 100000
T$1CLK= 000400
                                     WORD26= 0000064
WORD27= 000066
                                                                         WORD47 = . 000136
                                                                                                              WORD68=-000210
WORD69=-000212
WORD7 =-000016
                                                                                                                                                   WORD89= 000262
                                                                         WORD48= 000140
                                                                                                                                                   WORD9 = 000022
T$8BEH= 000020
                                     WORD28= 0000070
                                                                         WORD49=-000142
                                    WORD28= 000070
WORD29= 000072
WORD3 = 000006
WORD30= 000074
WORD31= 000076
                                                                                                                                                   WORD90=-000264
WORD91=-000266
WORD92=-000270
UBD.IN= 000020
WORD0 = 000000
WORD1 = 000002
                                                                         WORD5 = 000012
                                                                                                              WORD70=-000214
WORD71=-000216
WORD72=-000220
                                                                         WORD50 - 000144
                                                                                                                                                  WORD93= 000270
WORD93= 000272
WORD94= 000274
WORD95= 000276
WORD96= 000300
WORD97= 000302
                                                                         WORD51=-000146
                                                                         WORD52 = 000150
WORD53 = 000152
                                                                                                              WORD73=.000222
                                     WORD32= 000100
WORD33= 000102
WORD11= 000026
WORD12= 000030
                                                                                                              WORD74= 000224
WORD75= 000226
                                                                         WORD54= 000154
WORD13=-000032
                                     WORD34= 000104
                                                                         WORD55=-000156
                                                                                                              WORD76= 000230
                                                                         WORD56=-000160
WORD57=-000162
WORD14= 000034
                                     WORD35= 000106
                                                                                                              WORD77=-000232
                                                                                                                                                   WORD98= 000304
UORD45= 000036
                                     WORD36= 000110
WORD37= 000112
                                                                                                                                                  WORD99="000306
WRDVAL=-000310
XTREAD=-001000
                                                                                                              WORD78= 000234
WORD79= 000236
WORD13--000036
WORD16--000040
WORD17--000042
                                                                         WORD58=-000164
WORD59=-000166
WORD6 =-000014
                                     WORD38=-000114
                                                                                                              WORD8 = 000020
MORDIS= MANAGA
                                     WORD39=-000116
                                                                                                              WORD80 = . 000240
                                                                                                                                                   XTWRTE = . 000400
WORD19= 000046
                                     WORD4 = 000010
                                                                         WORD60 = . 000170
                                                                                                              WORD81= 000242
  ABS.
            ивравия
                             000
            ававав
                             คดเ
SPREST.
            000020
                             002
ERRORS DETECTED:
VIRTUAL-MEMORY-USED: 3001 WORDS- (-12-PAGES)
DYNAMIC MEMORY: 3860 WORDS: (12 PAGES)
ELAPSED:TIME: 00:00:39
```

SPREST, SPREST/+SP=[20,1]IM,[20,1]SPREST

```
27-MAR-80 15:34 PAGE 5 Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
                                                       .FITLE.-SPSUB....
 23456789
   000000
                                                       .PSECT: SPSUB
                                            ;
                                                       .MCALL · WTSE$S,CLEF$S.
             000003
                                            EFN.3
                                                                3
                                                      HARDWARE-QUERY-RESOLVER-'MANUAL' DEBUGGING AIDS-
SUBDOCUMENT-PROCESSOR-SUBROUTINES-
10
11
12
13
14
15
16
17
18
                                                      DATA TRANSFER
                                                      LOD-BUS-REGISTER-TO-A-DESTINATION-ON-THE-SP-BUS-
                                                      2(SP)
                                                                DATA FOR PRE-SELECTED SP DESTINATION.
19
20
21
   равара
                                            LBSP::
   000000
              016667
                        000002
                                  176424
                                                      MOV:
                                                                2(SP).QR⊈LBR
                                                                                               :MOVE DATA TO LOD BUS REG
22
23
24
25
27
29
29
31
   000006
              012746
                                                                                              CLR DRIVE AND PULSE
CLR SELECTION BITS
                        ийлийл
                                                      MOV.
                                                                #<Q$LBD+Q$LBP>,
             052716
012746
   000012
                        000360
                                                                #<Q$CSEL>,(SP)
#<Q$NCLK>,-(SP)
                                                      BIS-
   000016
                        176000
                                                      MOV
                                                                                               :SET-NO-CLOCKS
   000022
              052716
                        000340
                                                                 #Q$SP2,(SP)
                                                      BIS.
                                                                                               :SELECT SP
   000026
             012746
012746
   000032
                        006000
                                                      MOV.
                                                                #Q$RMC,-(SP)
                                                                                               ;CLEAR · CP · NO-CLOCK · BITS
   000036
                        001000
                                                      MOV.
                                                                 #Q$LBD,-(SP)
                                                                                               ;SET-LOD-BUS-DRIVE
   000042
                                                      CALL -
                                                                CSR4
32
                                                      DE-SELECTION
34
   000046
             912746
                        001001
                                                      MOV
                                                                #<Q$LBD+Q$LBP>,-(SP)
                                                                                               :CLEAR · DRIVE · AND · PULSE
             052716
012746
35
   000052
                        000360
                                                      BIS
                                                                #<Q$CSEL>,(SP)
#<Q$NCLK>,-(SP)
                                                                                               ;CLR · SELECTION · BITS
36
37
38
   000056
                        176000
                                                      MOV.
                                                                                               :SET NO-CLOCKS
   000062
                                                      CALL
                                                                CSR1
39
   000066
              011666
                        000002
                                                                 (SP),2(SP)
                                                      MOV-
                                                                                               :MOVE RETURN ADDRESS DOWN STACK Y
40
   000072
000074
                                                      TST.
RETURN
             005726
                                                                 (SP) +
                                                                                               :POINT TO RETURN ADDRESS
```

SPSUB-

0 M1110

SPSUB MACRO M1110 27-MAR-80 15:34 PAGE For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3

```
43
44
45
                                                             DATA · TRANSFER
46
47
48
49
50
51
52
53
54
55
                                                             LOD-BUS-REGISTER-TO-A-DESTINATION-ON-THE-SP-BUS
SINGLE-CLOCK SEQJENCER ONLY-
                                                             INPUT:
                                                                         DATA FOR PRE-SELECTED SP DESTINATION
                                                             2(SP)
    000076
                                                  LBSSC::
    000076
000104
               016667
                           000002
                                                                        2(SP),QR$LBR
#<Q$LBD+O$LBP>,-(SP)
                                      176424
                                                                                                           :MOVE:DATA TO:LOD:BUS:REG:
:CLEAR:DRIVE:AND:PULSE:
:CLR:SELECTION:BITS:
:SET:NO-CLOCKS:
                                                             MOV
               012746
052716
                           001001
                                                             MOV
56
    000110
                           000360
                                                             BIS
                                                                         #Q$CSEL,(SP)
57
58
59
    000114
               012746
                           176000
                                                             MOM
                                                                         #<Q$NCLK>,-(SP)
    000120
               052716
                           000340
                                                             BIS-
                                                                         #Q$SP2,(SP)
                                                                                                           ; SELECT: SP
    000124
                                                             CALL
                                                                         CSR1
                                                                                                           :WRITE · CONTROL · REGISTER ·
60
                                                                                                           CLEAR SP NO-CLOCK BITS
61
    000130
               012746
                           006000
                                                             MOV.
                                                                         #Q$RNC,-(SP)
#<Q$RSC+Q$LBD>,-(SP)
62
63
64
    000134
               012746
                           005000
                                                             MOV.
    000140
                                                             CALL.
                                                                         CSR1
65
                                                             DE-SELECTION
66
67
68
               012746
052716
012746
   000144
000150
                           001001
                                                             MCV.
                                                                         #<Q$LBD+Q$LBP>.-(SP)
#Q$CSEL.(SP)
#<Q$NCLK>.-(SP)
                                                                                                          CLEAR DRIVE AND PULSE
CLR SELECTION BITS
SET NO CLOCKS
                           000360
                                                             BIS.
69
70
    000154
                           176000
                                                             MOV.
    000160
                                                             CALL
                                                                         CSR1
71
72
73
    000164
               011666
                          000002
                                                             MOV-
                                                                         (SP),2(SP)
                                                                                                           :MOVE-RETURN-ADDRESS DOWN-STACK-
    000170
               005726
                                                                         (SP)+
                                                                                                           :POINT TO RETURN ADDRESS
74
    000172
                                                             RETURN.
```

SPSUB-O M1110 27-MAR-80 15:34 PAGE 7 Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3 76 77 78 79 80 81 82 83 84 800174 85 890124 DATA TRANSFER TO LOD BUS REG FROM SP OUTPUT: DATA FROM PRE-SELECTED SP SOURCE (SP) ŚPLB:∶ 000174 85 012746 052716 001001 MGV. BIS. MOV. 86 000200 87 000204 88 000210 89 000214 #<Q\$LBD+Q\$LBP>,-(SP) :CLEAR DRIVE AND PULSE :CLR SELECTION BITS/NO CLOCKS :SET NO-CLOCKS 176360 #<Q\$CSEL+Q\$NCLK>.(SP) #<Q\$SP2>.-(SP) 012746 000340 CSR1 (SP),-(SP) CALL 011646 016766 89 000214 90 000216 91 92 000224 93 000230 94 000234 95 000240 MOV. MOVE RETURN ADDR UP STACK MOVE DATA ONTO STACK - 1 176424 000002 MOV. QR⊈LBR,2(SP) 012746 000340 MOV. #Q\$SP2,-(SP) ;CLEAR·SP·SELECT· ;SET·NO+CLOCKS· ; 012746 176000 MOV. #<Q\$NCLK>,-(SP) CSR1 CALL. RETURN.

SPSUB- MACRO M1118 27-MAR-80 15:34 PAGE 8 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3 97 98 99 100 101 SP GONTROL REGISTER LOADING INPUT: 102 BIT-SETTING-FOR-SP-CONTROL-REGISTER 2(SP) 103 104 105 000242 000242 106 2(SP),QR\$LBR. #<Q\$LBD+Q\$LBP>,-(SP) 016667 000002 176424 MOV. 107 000250 012746 052716 001001 MOV. 100 000254 000360 BIS: #Q\$CSEL,(SP) 109 000260 012746 000120 #Q\$SP,-(SP) 110 000264 CALL CSR1 111 112.000270 005046 GLR -;CLEAR · NOTHING ;SET · PULSE -(SP)113 000272 114 000276 012746 000001 #0\$LBP,-(SP) 000276 CALL. CSR1 115 116 117 000302 000121 MOV: #<Q\$SP+Q\$LBP>,-(SP) :CLEAR · CR · SELECTION · AND · PULSE · SET · NOTHING 000306 000310 005046 -(SP)118 CALL CSR1 119 000314 000320 000322 120 121 011666 000002 MOV. (SP),2(SP) :MOVE-RETURN-ADDRESS DOWN-STACK :POINT-TO-RETURN-ADDRESS-005726 TST-(SP) +122 RETURN 123 124 000001 .END

SPSUB MO 0 - M1110 SYMBOL - TA	27-MAR-80 15:34 PAGE: Approved F	B-1 for Release 2005/07/1 €CIA	-RDP85-00514R000200020	001-3	
ALUCKE = 040000 ALUCE = 040000 A01 = 010000 BITVAL = 000001 BITI = 000002 BITI = 004000 BITI1 = 004000 BITI1 = 004000 BITI1 = 004000 BITI1 = 040000 BITI = 0400000 BITI = 0400000 BITI = 0400000 BITI = 04000000 BITI = 0400000000 BITI = 040000000000000000000000000000000000	BYTE42= 000052 BYTE44= 000053 BYTE44= 000054 BYTE45= 000056 BYTE46= 000057 BYTE49= 000061 BYTE49= 000061 BYTE5= 000062 BYTE51= 000063 BYTE51= 000064 BYTE55= 000064 BYTE55= 000067 BYTE55= 000067 BYTE55= 000071 BYTE58= 000072	BYTE94 000136 BYTE95 000137 BYTE96 000140 BYTE97 000141 BYTE98 000142 BYTE99 000143 BYTVAL 000144 CBKALL 001000 CBKCLK 000400 CPCCEN 010000 CPCEN 010000 CPCEN 010000 CPCEN 010000 CSCE 100000 CSCE 1000000 CSCE 1000000 CSCE 1000000 CSCE 100000000000000000000000000000000000	Q\$CP2·=·000260 //≈; Q\$CSC·=·010000 Q\$CSEL=·000360		002 002
711.1 = 000001 1	ALLE 1 3015 - ALLE 0 101540 1 5015	D6\$7 D=+D7.() D1987 (++) DMWAC U5+4		TT FOTR=+17634S TT GRD=+233274 	i

```
64= 000100 DMARRD= 000003
BYTE65= 0 Approved For Rejease 2005/07/12: CIA-RDP85 1005/148700020002000 13 AR= 176372 .
TD$TAU= 176362
BYTE12= 000014
BYTE13= 000015
BYTE14= 000016
                                                                                                 0$1ARC= 000002
0$1MRP= 000007
0$LBD = 001000
002 0$LBDP= 001001
                                  BYTE66= 000102
                                                                     EFN.3 = 000003
                                                                                                                                          TD$TDR=-176374
TD$TDW=-176364
BYTE15= 000017
                                  BYTE67 = . 000103
                                                                     ENBR: = 010000
BYTE16= 000020
                                  BYTE68= 000104
                                                                     LBSP -
                                                                                000000RG
                                                                                                                                          T$AD
                                                                                                                                                 = .000020
BYTE17= 000021
BYTE18= 000022
                                  BYTE69= 000105
                                                                     LBSSC.
                                                                                000076RG
                                                                                                  002 Q$LBP = 000001
                                                                                                                                                  - 0000002
                                                                                                                                          T$BA
                                  BYTE7 = 000007
                                                                     LOC.EN= 0000100
                                                                                                       Q$LDCD=.000003
                                                                                                                                          T$RD
BYTE19= 000023
                                  BYTE70= 000106
                                                                                                                                                  = -000010
                                                                     LOC.WA= 040000
                                                                                                       Q$LDMD= 000004
Q$LDPP= 002000
                                                                                                                                          -7$890 - 100000°
T$BT =,000020
BYTE2 - 0000002
                                  BYTE71 = . 000107
                                                                     LOC.WB= 100000
BYTE20= 000024
                                  BYTE72= 000110
                                                                     MAREN1 = 000001
                                                                                                       Q$LHP = 010000
                                                                                                                                          T$BTAR= 000030
BYTE21 = 000025
                                  BYTE73= 000111
BYTE74= 000112
                                                                     MAREN2 = . 004000
                                                                                                       Q$MNC -= 140000
Q$MR -= 000052
Q$MRP = 000040
                                                                                                                                          T$BTD = 002000
T$CD = 002000
T$CLK = 002000
T$DISK = 000200
T$DISK = 000200
T$DPD = 000004
BYTE22= 0000026
                                                                     MARLOD= 010000
MAROUT= 000002
MAR.LO= 002000
BYTE23= 0000027
                                  BYTE75= 000113
BYTE24= 000030
                                  BYTE76= 000114
BYTE77= 000115
                                                                                                       Q$MRP2= 000240
Q$MSC = 040000
Q$MSET= 000004
BYTE25= 000031
                                                                     MAR.OU= 000040
BYTE26= 000032
BYTE27= 000033
                                  BYTE78= 000116
                                                                     MBKALL = . 001000
MBKCLK = . 000400
                                                                                                                                          T$EMEM= . 010000
                                  BYTE79= 000117
                                                                                                       Q$MSP = 100000
Q$NCLK= 176000
Q$PP = 000100
                                                                                                                                          T$F$AA= 000000
T$F$AB= 000004
BYTE28= 000034
                                  BYTE8 = 000010
                                                                     MMADRD=-000100
BYTE29= 000035
                                  BYTE80= .000120
                                                                     MMLEFT= 000002
MMOE = 000004
                                                                                                                                          T$FSAC= 000014
BYTE3 = 000003
                                  BYTE81= 000121
                                                                                                       Q$PPSW= 000320
                                                                                                                                          T$FSB2= 000010
T$IB = 000026
BYTE30= 000036
                                  BYTE82 = 000122
BYTE83 = 000123
                                                                     MMWRTE = . 000010
                                                                                                       Q$PP2 - 000300
BYTE31 = . 000037
                                                                     MNOBRE = 100000
MREN1 = 000001
MREN2 = 020000
                                                                                                       Q$QHLT= 0000013
                                                                                                                                          T$IBAR=
                                                                                                                                                     000024
BYTE32= 000040
BYTE33= 000041
                                   BYTE84= 000124
                                                                                                       Q$QL. = 000013
Q$QLA. = 000053
Q$QLB. = 000054
                                                                                                                                          T$IBE - - 020000
T$IBF - - 040000
                                  BYTE85=-000125
DYTE34= 000042
                                  BYTE86= 000126
                                                                     MSYN - 000040
N - 000144
                                                                                                                                          Ţ$ICD·=·
JYTE35 - 000043
                                  BYTE97 - 000127
                                                                                                                                          T$MODE = 004000 T$0B = 004000
                                                                                                       Q$OLR.=.000001
0YTE36= 000044
                                  BYTE88= 000130
                                                                     PLB.
                                                                             = 000010
                                                                                                       Q$QW- = 000042
3YTE37= 000045
                                  BYTE89=-000131
                                                                            = · 000030
                                                                                                       Q$RDCD= 000005
                                                                     PLC:
ũYTE38= · 000046
                                  BYTE9 = 000011
                                                                     PLD.
                                                                                                       Q$RDMD= 000006
                                                                                                                                          T$0BF - 010000
                                                                     PLRWR = 000200
PLR.EN = 000200
BYTE39=.000047
                                  BYTE90= 000132
                                                                                                       Q$REBK= 001000
                                                                                                                                          T$0BRA= 000034
BYTE4 = 000004
                                  BYTE91= 000133
                                                                                                       Q$RNC - - 006000
Q$RSC - - 004000
                                                                                                                                          T$0BWA= 000032
BYTE40= 000050
                                  BYTE92=:000134
                                                                    QR$CR1=-176420
QR$CR2=-176422
                                                                                                                                          T$0UTA= 100000
BYTE41 = . 000051
                                  BYTE93 = . 000135
                                                                                                       Q$RSET= 000010
                                                                                                                                          T$RBD0 = . 000200
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: 34 PAGE 8-2 Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3 SYMBOL TA T\$RNB - = - 000040 WORD19=-000046 WORD2-=-000004 WORD4 - 000010 WORD60= 000170 T\$RSET= 040000 WORD40 = 000120 WORD41 = 000122 WORD61= 000172 T\$SC: =:000022 WORD20= 000050 WORD62= 000174 T\$SCLK= 020000 WORD21=-000052 WORD22=-000054 WORD42= 000124 WORD63= 000176 T\$SEG1 = . 000000 WORD43=-000126 WORD64= 000200 i\$SEG2= 0000001 WORD23= 000056 WORD44= 000130 WORD65= 000202 T\$SEG3=-000002 WORD24= 000060 WORD45 = . 000132 . WORD66= 000204 T\$SO- ≕-000001 WORD25=-000062 WORD46 = . 000134 WORD67= 000206 T\$UBUS= 100000 WORD26=-000064 WORD27=-000066 WORD28=-000070 WORD47 = 000136 WORD68= 000210 T\$1CLK=-000400 WORD69=.000212 WORD7 =.000016 WORD48=.000140 T\$8BEH= 000020 WORD49 = 000142 WORD5 = 000012 UBD.IN=-000020 WORD0 =-000000 WORD1 =-000002 WORD29= 0000072 WORD3 = 000006 WORD70=-000214 WORD71=-000216 WORD72=-000220 WORD50 = 000144 WORD30= 000074 WORD51= 000146 WORD52= 000150 WORD10=-000024 WORD11=-000026 WORD12=-000030 WORD31= 000076 WORD73= 000222 WORD32=-000100 WORD53= 000152 WORD74= 000224 WORD75= 000226 WORD33= 000102 WORD34= 000104 WORD54= 000154 WORD13= 0000032 WORD75--000226 WORD76--000230 WORD77--000232 WORD78--000234 WORD55= 000156 WORD14= 000034 WORD15= 000036 WORD35= 000106 WORD56=-000160 WORD36=-000110 WORD37=-000112 WORD57=-000162 WORD16≕ 000040 WORD58=-000164 WORD79= 000236 WORD17=-000042 WORD38= 000114 WORD59= 000166 WORD6 = 000014 WORD8 - 000020 WORD18= 0000044 WORD39= 000116 WORD80= 000240 . ABS: 000 000000 SPSUB-SPSUB 000324 ERRORS DETECTED: 002 VIRTUAL MEMORY USED: 3112-WORDS- (-13 PAGES) DYNAMIC-MEMORY: 3860 WORDS- (-14 PAGES) ELAPSED-TIME: 00:00:42-SPSUB, SPSUB/-SP=[20,1]IM,[20,1]SPSUB

SPSHB. . . M

0 Mili0 27-MAR-80 15:34

WORD81=-000242 WORD82=-000244

WORD83=T000246

WORD84= 000250

WORD88= 000260

WORD89= 000262

WORD9 = 000022 WORD90 = 000264

WORD91= 000266

WORD92= 000270

WORD93=-000270 WORD93=-000274 WORD94=-000274

WORD95= 000276

WORD96= 000300 WORD97= 000302

WORD98= 000304

WORD99 - 000306

WRDVAL = : 000310

XTREAD = . 001000

XTWRTE = . 000400

E 1 44 12 73 25 11 1

WORD85= 000252 WORD86= 000254√7.0; WORD87= 000256

AIDQR.TSK

MEMORY ALLOCATION MAP TKB 27-MAR-80 Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3

TASK: NAME: : AIDOR:
PARTITION:NAME: GEN
IDENTIFICATION: 08
TASK: UIC: : [20,3]:
STACK: LIMITS: 040176 041175 001000 00512:
PRG:XFR:ADDRESS: 043372:
TASK:ATTRIBUTES: AL.CP:
TOTAL:ADDRESS:WINDOWS: 1.
TASK:ADDRESS:WINDOWS: 1.
TASK:ADDRESS:LIMITS: 040000 076167
R-W DISK BLK:LIMITS: 0400042 000137 000076 00062.

AIDQR.TSK:7 OVERLAY DESCRIPTION:

BASE.	TOP ·	LENG	TH ·		
040000 072014 072364 072364 072364 072364	072013 072363 073557 073473 073657 073353	032014 000350 001174 001110 001274 000770	13324. 00232. 00636. 00584. 00700.	QMAIN. MRP.	MRLD : MRPR : MRREST : MRBUG :
072014 073520 073520 073520 073520 073520 072014 072014	073517 074373 076167 075327 075407 075303 072647 072567	001504 000654 002450 001610 001670 001564 000634	00836. 00428. 01320. 00904. 00952. 00884. 00412.	CP· BCE·	CPBUG1 CPBUG2 CPREST CPLD CPPR
072570 072570 072570 072570 072014	075233 075167 074167 072573	000554 002444 002400 001400 000560	00364. 01316. 01280. 00768. 00368.	PPS.	PPLD: PPPR: PPREST:
072574 072574 072574	073647 07354 7 07261.	001054 000754 000020	00556. 00492. 00016.	31	SPLD: SPPR: SPREST

AIDOR: TSK: 7 MEMORY ALLOCATION MAP TKB PAGE 2.

MMAIN: 27-MAR-80 Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3

*** ROOT-SEGMENT: QMAIN-

R/W-MEM- LIMITS: 040000 072013 032014 13324. DISK-BLK-LIMITS: 000042-000074 000033 00027.

MEMORY-ALLOCATION-SYNOPSIS:

SECTION,		TITLE . IDENT.	FILE
. BLK::(RW.I.LCL.REL.CON)			and the rate and
CPSUB::(RW,I,LCL,REL,CON)	041176 005116 02638.	QMAIN.	QMAIN.OBJ:1
C. SOD. (KW, I) ECE; REE; COM)	053056 000502 00322. 053056 000502 00322.	CPSUB.	CPSUB.OBJ:1
MRPSUB:(RW,I,LCL,REL,CON)	053560 000506 00326.	0, 005	C. 200:002*1
PPSUB : (RW, I, LCL, REL, CON)	053560 000506 00326. 054266 000766 00502.	MRPSUB.	MRPSUB.OBJ;1
	054266 000766 00502.	PPSUB.	PPSUB.OBJ:1
\$\$ALER:(RW,I,LCL,REL,CON)			
#\$ALVC:(RW.D.LCL.REL.CON) \$\$AUTO:(RW.I.LCL.REL.CON)			
\$\$FSR1:(RW.D.GBL.REL.OVR)			
##ECDO. (DU D. CD) DEL COUN	055510 001020 00520.	QMAIN.	QMAIN.OBJ;1
\$\$F\$R2:(RW.D.GBL.REL.CON) \$\$MRKS:(RO.I.LCL.REL.OVR)			•
\$\$OVDT:(RW.D.LCL.REL.OVR)	056634 000020 00016.		
\$\$0VRS:(RW,I,LCL,ABS,CON)			
\$\$RDSG:(RO,I,LCL,REL,OVR) \$\$RESL:(RW,I,LCL,REL,CON)			
\$\$RGDS:(RW.D.LCL.REL.CON)			
##RTS::(RW.I.GPL.REL.OVR)	071144 000002 00002.		
\$\$SGD0:(RW.D.LCL.REL.OVR) \$\$SGD1:(RW.D.LCL.REL.CON)			
\$\$SGD2:(RW.D.LCL.REL.OVR)	071542 000002 00002		
\$\$WNDS:(RW,D,LCL,REL,CON)	071544 000000 00000.		

GLOBAL SYMBOLS:

ASCIZ HSTFL HSTWR: BASE	041232-R	CDHIGH CDLOW CL	043754-R- 043736-R- 041430-R- 041432-R- 043646-R-	DATA1 DATA2 DATA3 DATA4	043606-R 041404-R 041406-R 041410-R 041412-R	ERR1 ERR10 ERR11 ERR12	046056-R · 046052-R · 046046-R ·	FAHIGH FALOW FIND GCMBLK	041226-R · 041440-R · 041442-R · 045206-R · 043064-R	INCVAL IO.DET IO.RVB IO.WVB	041452~R ·041376-R ·002000 010400 ·011000		041446-R 000004 044602-R 000001 041420-R
3CE ·	055320-R	COMXX	043532-R	EFBUF.	041212-R	ERR2			·043064-R· ·041236-R·		·011000 044762-R	MDHIGH	
	1.041454-R	CP ·	045634-R · 055310-R ·	EFN.2	000001 000002	ERR3 ERR4	046106-R	GCMPHT	-041360-R - -041362-R -	LBCSC.	053224-R 053322-R	MEND.	041374-R ·041414-R
BREAK	00.000	CPCRA.		EFH.33		ERR5 ERR6	046102-R· 046076-R·	G.DPRM	000160		053732-R	MMLOW	941416-R
5UFSM	`-044010-R- -044026-∷- -043772-R-		041424-R		000004 046032-R	ERR7 ERR8	046072+R · 046066-R ·	HANG2 -	044624-R: 044710-R:	LBPSC	054266-R 054266-R 054364-R		054176-R 054204-R
001.32	043112*K	CSLOW-	041426-R	Annrove	046016-R ed For Rele	ERR9	046062-R 5/07/1 € CL		5-005141200	חברות הבי	10041444-R	MRPLB.	054126-B

WILL. W

AIDOR.TSK

MEMORY ALLOCATION MAP TKB Approved For Release 2005/07/11 CIA-RDP85-00514R000200020001-3

\$CEFI 005174 \$DIV 007146 \$DRDSE 017134 \$MUL 007116 PRINT: .041746-R: QXHIGH 041434-R: MSTRT- 041370-R OUT1 046042-R SDHIGH-041470-R-SDLOW- 041472-R-SELPG- 054614-R-SQHIGH-041460-R-SQLOW- 041462-R-SRHIGH-041464-R-TRTBL 041474-R TRTBL2:041673-R TSKTCB:041202-R UNPK: 045544-R MSTR2 041372-R PACK 045324-R MYSELF · 041176-R QXLOW-PDATA: 044162-R 041436-R SRHIGH SRLOW STAT STOP TIME NEQLB -054532-R · 054462-R · 010000 PPCR 001000 SEQCS 053056-R 041466-R \$MUL 007116 \$TKTCB 004026 RSPCHT 041400-R RTHPT 041366-R OLDVEC - 041204-k PPLB. SEQMM. SPCR. 053560-R 055350-R 041222-R ·046036-R ·046022-R **UPLIM** 041402-R ONCE -000100 PPS 055330-R WRTCS WRTMM. 053144-R OUT-002000 PRDATA · 044354-R · SCAN 045114-R SPS. 055340-R 053646-R

MEMORY ALLOCATION MAP TKB 27-MAR-80 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3 AIDOR.TSK:7 MRP .

*** SEGMENT: MRP.

R/W-MEM- LIMITS: 072014 072363 000350 00232. DISK-BLK-LIMITS: 000075 000075 000001 00001.

MEMORY ALLOCATION SYNOPSIS:

SECTION. TITLE . IDENT: FILE . .

BLK::(RW.I.LCL.REL.CON) 072014 000000 00000. RP::(RW.I.LCL.REL.CON) 072014 000226 00150.

MRP.OBJ:1

GLOBAL SYMBOLS:

AT1 072322-R · GO1 072332-R - MRP 072064-R· OF1 072342-R RE1 072272-R SS1 072262-R LD1 072352-R 072242-R · MRPXX · 072144-R · PRI CL 1 072252+R RS1 072302-R ST1 072312-R

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